CRISIS ADVANCE PLANNING AND FORCE CAPABITIES INTEGRATION: ENABLING RAPID GLOBAL MOBILITY BY ACCELERATING THE DEPLOYMENT PROCESS

GRADUATE RESEARCH PROJECT

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Abstract

As a result of the reduction in overseas U.S. forces at a time of global instability, the U.S. military has transformed to a home-based expeditionary force, highly dependent on rapid deployment to project force abroad in response to crisis. Effective response to crises demands rapid, decisive force projection in order to reduce loss of life, mitigate the after effects of disaster such as the spread of disease, and ensure success against our more hostile adversaries in time of war. Rapid force projection demands pre-deployment planning processes that are timely and flexible. Unfortunately, the current pre-deployment processes are neither rapid nor flexible enough to effectively respond to crises. Moving potentially tremendous amounts of personnel and equipment from CONUS bases, demands more efficient, effective planning tools and processes.

To facilitate changes to the deployment process, senior leadership has set a time standard for development and validation of a TPFDD force flow for the first seven days of a crisis within 72- hours. The USJFCOM J4 JDPO division has identified several process improvement areas to meet the 72-hour time standard. Key among them is the Joint Force Capabilities Register, a capabilities-based tool for deployment planning.

This graduate research project addresses the current joint planning process, problems with the current process, the 72-hour objective time standard, the benefit of advance planning for crisis, and the merits and challenges of the USJFCOM Joint Force Capabilities Register. It provides a survey of crisis deployment acceleration initiatives from USSOCOM, USCENTCOM, and USPACOM, and offers suggestions for accelerating the crisis deployment processes of the future.

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I. Introduction

Background

The U.S. military has been called upon many times in the last decade to deploy in support of operations ranging from small-scale humanitarian operations to major regional conflicts. Some of the reasons for a renewed expeditionary focus include the reduction in the number of our overseas bases and destabilization throughout the world brought on by the end of the Cold War. The vision for the global climate to come and for future military forces involves continued expeditionary operations as well. The "peace dividend" that the fall of communism has given us is a reduction of our military forces. At the same time a lack of a common enemy has generated massive instability in smaller countries throughout the world. The end result is that the U.S. military has transformed to a home-based expeditionary force, highly dependent on rapid deployment to project force abroad.

The United States, as the only remaining global power has sought to lend assistance to regions in which war, famine, and genocide have sought to disrupt global stability. Such action is in our vital national interest. This global participation has been

and will continue to be highly unpredictable and falls in the category of crisis reaction and response in the form of Military Operations Other Than War (MOOTW).

> The National Security Strategy of the United States is supported by the Armed Forces with a National Military Strategy which has two military objectives; promote peace and stability and, when necessary, defeat adversaries. This is done through power projection and force projection. **Power projection is the ability of a nation to apply all or some of its elements of national power — political, economic, informational, or military — to respond to crises, to contribute to deterrence, and to enhance regional stabilit**y. Force projection is the military element of national power that systematically and rapidly moves military forces in response to requirements of war or military operations other than war. Enabled by forward presence and rapid global mobility, it allows a joint force commander (JFC) to position forces and materiel for mission success. (DoD: JP 3-35, 1999:vii)

Response to crises demands rapid, decisive force projection in order to reduce loss of life, mitigate the aftereffects of disaster such as the spread of disease, and ensure success against our more hostile adversaries in time of combat. Rapid force projection demands pre-deployment planning processes that are timely and flexible. Unfortunately, the current pre-deployment processes are neither rapid nor flexible enough to effectively respond to crises.

The lack of good up-front processes is compounded by the expectation of today's military that more must get done with less. These issues affecting effective crisis response combined with the nature of moving potentially tremendous amounts of personnel and equipment from CONUS bases, demand more efficient, effective planning tools and processes. Chairman of the Joint Chiefs of Staff, General John M. Shalikashvili stated this best by saying, "We must be the world's premier deployer!" (DoD: JP 3-35, 1999:III-1).

Problem Statement

The problem is whether or not it is possible, within a 72-hour crisis response, to identify and validate force requirements for the first seven days of force flow in a TPFDD with level 4 detail for any crisis across the operational spectrum. Level 4 detail, is detail expressed as number of passengers and individual dimensional data of cargo by equipment type and Unit Line Number (ULN). The current crisis action planning process is too long and unfocused to enable the 72-hour time standard. The current CAP process does not provide a standardized means to rapidly identify and validate force requirements. The current process for conducting CAP is slow and compartmentalized, with a reliance on notional force data resulting in delayed decisions concerning specific force requirements and the sequencing of those forces into theater. This research will seek to address the question of whether crisis action planning can be accelerated by the use of crisis advance planning tools in conjunction with the Joint Force Capabilities Register by asking the following research question and complementary investigative questions.

Research Question

How can the integration of crisis advance planning integrated with the Joint Force Capabilities Register support rapid force projection and the 72-hour TPFDD development and validation time standard in the crisis action planning process?

Investigative Questions

To answer the research question, several investigative questions must be answered:

1. What are the joint planning processes, and how does deployment planning support those processes?
2. What problems are encountered with force projection operations today?
3. What are the issues behind the 72-hour objective time standard for TPFDD validation?
4. What decision and planning approaches are being considered to help achieve a 72-hour time standard?
5. What are the issues that affect the operational implementation of crisis advance planning tools and the Joint Force Capabilities Register for crisis action TPFDD development?
6. What are some specific approaches that could be used to streamline the crisis planning and deployment processes in the future?

Scope and Methodology

The scope and applicability of this research paper will include crisis actions ranging from non-combat military operations other than war (MOOTW) such as noncombatant evacuations (NEOs) to theater war operations including those addressed by deliberate plans. Furthermore, the most likely military crisis actions for a given theater of operations, emphasizing a breakdown of required force capabilities should be isolated as the key area for advance planning for crises, in order to focus efforts effectively.

Interviews. The nature of crisis action planning involves a high degree of high-level decision making, therefore, I will interview key personnel within the office of the Joint Deployment Process Owner (JDPO) at United States Joint Forces Command (USUSJFCOM), United States Central Command (USCENTCOM), United States European Command (USEUCOM), and United States Pacific Command (USPACOM). These informal interviews will serve to highlight the validity of a need for a 72-hour standard and investigate current initiatives towards rapid crisis response.

Specifically, the interviews will address the past history of the joint deployment process, the challenges faced in the evolution and streamlining of the 72-hour TPFDD process, and the feasibility of my hypothesis from the user's perspective. They will also be used to ascertain the utility of advance planning shells integrated with packaged force capabilities in attempts to respond effectively to crises around the world within short periods of time. They will specifically address the need to have the capability to integrate force capabilities with the demands of crises across the spectrum of operations, and build and validate the first seven days of TPFDD flow in less than 72-hours.

Analysis and Study of Common Capabilities between the Services. One important premise in this research is that the Services possess overlapping capabilities and that the different military operations that the U.S. military becomes involved with require some common capabilities in the early stage of crisis response. The important thing is to analyze and be able to prove or disprove the presence of these common capabilities, in order to assess the feasibility of the use of advance planning shells in advance of crisis actions. In order to research this facet of the deployment process, I will reference the CD-ROM from Joint Publication 3-33 and extract the capabilities that each

service brings to the fight. I will then analyze the data for overlap of capabilities between the Services, and finally, attempt to isolate some of the common capabilities required in military operations across the spectrum in the first days of a military crisis response.

Organization

This research project is organized into seven chapters. The first provided a brief introduction to this topic and outlined how this study will be conducted. The second chapter focuses on the joint deployment processes, to include deliberate planning and the current crisis action planning processes. The third chapter provides some background into the problems associated with the current deployment processes, emphasizing crisis action planning and the time it takes to develop and validate a TPFDD in response to a crisis. The fourth chapter discusses the current time standard for TPFDD crisis action development and validation, and JDPO approaches to expediting the current crisis planning process and achieving a 72-hour time standard. The fifth chapter addresses advance crisis planning and the Joint Force Capabilities Register (JFCR) as two of the key tools in the future crisis planning process. The sixth chapter is a survey of initiatives and alternate approaches under consideration for accelerating the crisis planning and deployment processes. Finally, the seventh chapter applies specific conclusions and recommendations that may be used to streamline the crisis planning process by integrating contingency plans with current force capabilities to support the 72-hour TPFDD development and validation time standard.

II. The Current Joint Planning Processes

"In times of peace the general staff should plan for all contingencies of war. Its archives should contain the historical details of the past and all statistical, geographical, topographical, and strategic treatises and papers for the present and future." **Jomini: Precis de l' Art de la Guerre, (1838) (DoD: JP 5-0, 1995:III-3)**

This chapter will provide an overview of the joint planning processes and briefly address some of the tools available for use in the joint planning process. Specifically, it will address joint planning in general, the building blocks of joint planning, command relationships, deliberate planning, the Crisis Action Planning (CAP) process, and the role of airlift in the crisis deployment process. A graphic overview of the current joint planning processes, including both deliberate planning and CAP, is presented in Figure 1.

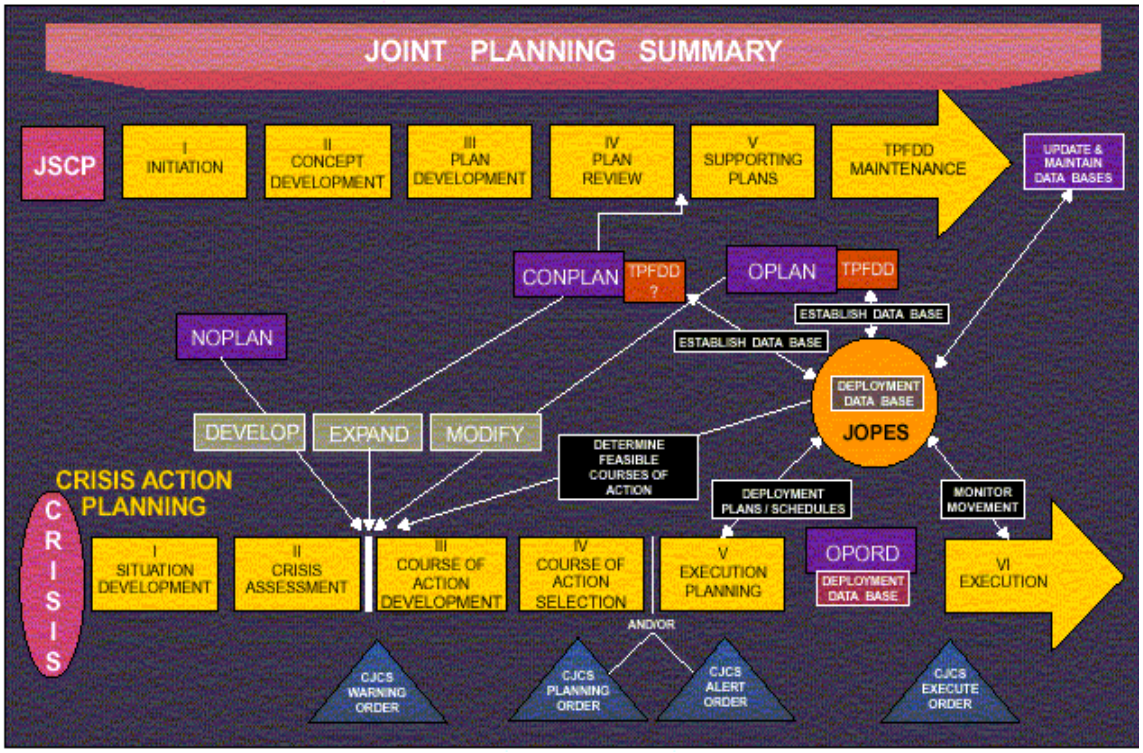

Figure 1. Joint Planning Processes (DoD: JP 3-35:A-3).

The Joint Deployment Planning Process

"The joint deployment process begins when planning is initiated for force projection operations in response to an action or event that requires protection of US national interests. Deployment operations involve four phases -- predeployment activities; movement to and activities at the port of embarkation (POE); movement to port of debarkation (POD); and joint reception, staging, onward movement, and integration (JRSOI) activities" (DoD: CJCSM 3122.02a, 2000: A-1). There are two types of planning associated with the Joint Deployment Process: deliberate planning and Crisis Action Planning (CAP). Deliberate planning is initiated by a need to address some potential future conflict highlighted by the Joint Strategic Capabilities Plan (JSCP) as depicted above, while Crisis Action Planning (CAP) is initiated in response to some crisis requiring a military solution.

Joint Deployment Planning Building Blocks: TPFDDs, UTCs, UICs, and ULNs

During deliberate planning and crisis action planning, force requirements and the time phasing of the movement of those forces into the theater of operations is documented in the TPFDD. Thus, the TPFDD is essentially the documentation of the plan. It is "the Joint Operation Planning and Execution System (JOPES) data base portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan" (USJFCOM:JDPO Glossary, 2000:5). The TPFDD data includes information on units already in place, units to be deployed and their arrival sequence, routing and movement data, and estimates of

non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces and transportation requirements. It answers the questions of who, what, where, and how (Valle, 2000:9).

Capabilities within the TPFDD can be called up by unit type code (UTC). The UTC is a Joint Chiefs of Staff developed and assigned code, consisting of five characters that uniquely identify a "type unit" (DoD: JP 1-02, 2001:449). "Within this five-character UTC are details of the number and type of personnel and/or equipment inherent in the generic (notional) force package. In addition, every UTC contains a narrative description of its capability and usually lists the unit related supplies required to accomplish the mission" (Valle, 2000:9). UTCs are generally tailored down from MTW sized capabilities during CAP to the appropriate sizes to respond to a Supported Commander's concept of operations and utilize transportation assets effectively. It is important to note that UTCs can only be tailored downward, as the addition of forces to deployable UTCs comes at the cost of other UTCs (Valle, 2000:10; Consentino interview, 2001).

The unit identification code is a six-character, alphanumeric code that uniquely identifies each Active, Reserve, and National Guard unit of the Armed Forces (DoD: JP 1-02, 2001:448). When tied to a specific UTC, the combination represents both a type of force to be deployed

and the specific unit source of the capability within the TPFDD (Valle, 2000:11).

Another key TPFDD reference is the Unit Line Number (ULN), which is a seven-character, alphanumeric field that uniquely describes a unit entry (line) in a JOPES TPFDD. This code is tied to a specific TPFDD line entry that describes a unique increment of a unit deployment, i.e., advance party, main body, equipment by sea and air, reception team, or trail party (DoD: JP 1-02, 2001:448; USJFCOM:JDPO Glossary, 2000:6).

Command Relationships

Understanding the delineation of responsibilities of the "Supported" and "Supporting" Commanders during CAP is important in the overall understanding of the CAP processes. The Supported Commander is the commander having primary responsibility for all aspects of a task assigned by the Joint Strategic Capabilities Plan (JSCP) or other joint operation planning authority. With regards to joint operation planning, the Supported Commander prepares operation plans or operation orders in response to requirements of the Chairman of the Joint Chiefs of Staff. This person is generally a combatant commander, but a Joint Task Force (JTF) Commander might be designated by the CINC in the case of an OPLAN or CONPLAN with an associated JTF as the Supported Commander responsible for CAP (DoD: CJCSM 3122.02a, 2000:A-2). During deployment and redeployment operations, the Supported Commander is responsible for building and validating requirements, determining pre-deployment standards, and balancing and regulating the flow of transportation. The Supported

Commander performs these activities with assistance from assigned supporting combatant commands, Service component commands, Services, and combat support agencies (DoD: CJCSM 3122.02a, 2000: A-1).

The Supporting Commanders for a given crisis might be CINCUSTRANSCOM in his role as the broker of global transportation for the joint community, CINCUSUSJFCOM in his role as a joint force provider, or another geographic CINC, such as CINCUSEUCOM, can act as the force provider. The Services and defense agencies provide additional support. Transportation feasibility analysis is conducted by USTRANSCOM in conjunction with the Supported Commander during all methods of planning. This analysis is conducted using models, simulations, and transportation expertise. It is important to note that "dependable transportation feasibility analysis is contingent on accurate combatant command analysis of theater transportability" (DoD: JP 3-35, 1999:A-3).

The Deliberate planning Process

Deliberate planning is, as the name implies, deliberate and serial in nature. The premise of deliberate planning is that it is based on a specific operational situation, geographic area, opposing force, and expected timeline. The trigger for traditional deliberate planning is based on long-term strategic situational projections of future major military operation at the Major Theater War (MTW) level (as defined in the JSCP), as opposed to a need for immediate response to crisis. Combatant commanders might engage in deliberate planning in response to CJCS requirements, JSCP tasking, or self-determined contingencies.

Because deliberate plans address future MTW-level operations, with an expectation of massive force requirements to respond effectively, it is possible and necessary to address plans for such operations in a serial, methodical, and deliberate manner. Because deliberate plans address specific enemies with specific required force capabilities, and assume involvement at the national level, it is also possible to build TPFDDs at level 4 detail for off the shelf use, albeit with notional unit data. The combination of the use of notional unit data and the fact that our nation has never had to deploy a deliberate TPFDD leads many of those involved in deliberate planning to question the executability of deliberate plan TPFDDs (Kafer, 2001). Deliberate plans may be developed over a period over years rather than hours, days, or weeks, as is required during crisis action planning.

Deliberate planning is a cyclic, peacetime planning process to develop and refine plans to be used in wartime (see Figure 2). It is used when time permits the total participation of the commanders and staffs of the Joint Planning and Execution Community (JPEC). Deliberate plans are based on matching available warfighting resources with the courses of action predicted to be effective against intelligence estimates of potential enemy activity. The outputs of the deliberate planning processes are documented in Operations Plans (OPLANs), Concept Plans (CONPLANs), and Functional Plans (FUNCPLANs). In the context of the deliberate planning process, each of these plans would ordinarily have a supporting TPFDD and/or Time Phased Force and Deployment List (TPFDL). OPLANS and CONPLANS are the most common wartime or contingency outputs. FUNCPLANs are used for military operations in a peacetime or permissive environment for specific functions or discrete tasks, or to address peacetime

operational concerns (e.g., disaster relief, humanitarian assistance, peacekeeping, or counter-drug operations) (DoD: JP 3-35, 1999:A-3).

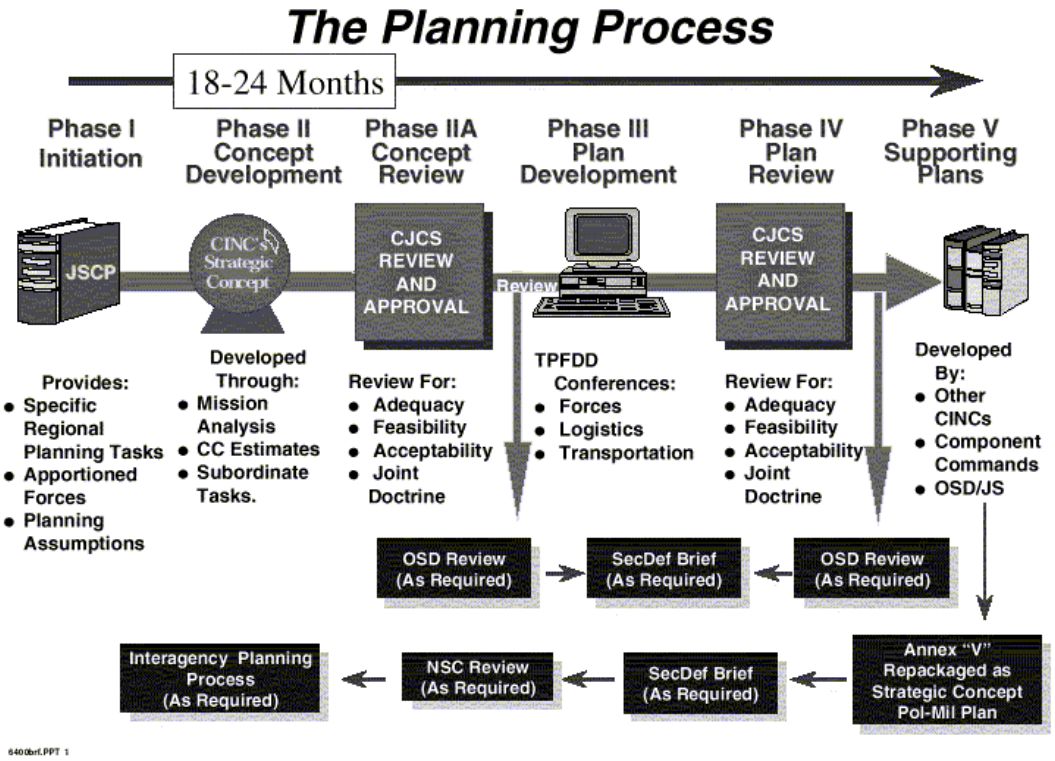

Figure 2-The Deliberate planning Process (DoD: CJCSM 3122-01, 2000:C3).

The Crisis Action Planning Process

Crisis planning is a highly reactive process, often requiring mobilization within hours or days for military crisis response to be pertinent or effective. A crisis is by definition unpredictable, short-term, rapidly changing, and dependent on rapid response. The official joint definition of a crisis is:

> An incident or situation involving a threat to the United States, its territories, citizens, military forces, possessions, or vital interests that develops rapidly and creates a condition of such diplomatic, economic, political, or military importance that commitment of US military forces

> and resources is contemplated in order to achieve national objectives. (DoD: JP 1-02, 2001:106)

Different crises may require different force capabilities for greatest response effectiveness. While a deliberate plan can specify detail down to specific units or portions of units, respondents to crises may be different each time as constrained resources respond to multiple crises around the world. Therefore, unit assignment presents specific challenges to a JTF/CC once a plan has been validated. "The other challenge during crisis ops is the time required to identify specific capabilities. For example, in a humanitarian crisis, water purification may be required. However, it takes time to figure out how much, how it will be distributed (numbers of trucks), who will provide it, etc." (Kafer, 2001).

The relationship between Deliberate planning and Crisis Action Planning is such that CAP is intended to transition military operations from planning into execution, while deliberate planning is used to anticipate the most probable crises and facilitate rapid decision making in the event that those crises should occur. Ideally, the use of OPLANS output from deliberate planning would facilitate more rapid selection of courses of action (COAs) by implementing an "off the shelf" solution to an existing crisis situation. In the event that no OPLAN exists to implement, an OPORD would be developed and executed. Even though deliberate joint planning is supposed to be used to the maximum extent possible in the CAP process, the nature of crises requiring military intervention is such that not every potential crisis can be planned for. Therefore, the key to successful CAP, is the flexible adaptation of planning processes which appropriately address the need for

timeliness of the response, effective communications, possible and probable COAs, and available resources.

> CAP procedures provide for the rapid and effective exchange of information and analysis, the timely preparation of military COAs for consideration by the NCA, and the prompt transmission of NCA decisions to Supported Commanders. (DoD: JP 3-35, 1999: A-5)

The CAP process as outlined by the Joint Planning and Execution System (JOPES) consists of six phases: Phase I-Situation Development, Phase II-Crisis Assessment, Phase III-Course of Action (COA) development, Phase IV-COA presentation and selection by the National Command Authority, Phase V-Execution Planning, and Phase VI-Execution.

PHASE I SITUATION DEVELOPMENT	PHASE II CRISIS ASSESSMENT	PHASE III COURSE OF ACTION DEVELOPMENT	PHASE IV COURSE OF ACTION SELECTION	PHASE V EXECUTION PLANNING	PHASE VI EXECUTION
EVENT					
EVENT OCCURS WITH NATIONAL SECURITY IMPLICATIONS	CINC's REPORT/ ASSESSMENT RECEIVED	CJCS PUBLISHES WARNING ORDER	CINC PRESENTS REFINED AND PRIORITIZED COAs TO NCA	CINC RECEIVES ALERT ORDER OR PLANNING ORDER	NCA DECISION TO EXECUTE OPORD
ACTION					
• CINC: MONITOR WORLD SITUATION • CINC: IDENTIFY PROBLEM • CINC: SUBMIT CINC's ASSESSMENT	• CINC: INCREASE MONITORING • CINC: INCREASE REPORTING • JCS: ADVISE ON POSSIBLE MILITARY ACTION • JCS: NCA-JCS EVALUATION	• CINC: DEVELOP COAs • CINC: EVALUATE COAs • CINC: CREATE/MODIFY JOPES DATA BASE • CINC: ASSIGN TASKS TO SUBORDINATES BY EVALUATION REQUEST MESSAGE • USTRANSCOM: PREPARE DEPLOYMENT ESTIMATES • JCS: REVIEW COMMANDER'S ESTIMATES	• CJCS: GIVE MILITARY ADVICE TO NCA • CJCS: MAY PUBLISH PLANNING ORDER TO BEGIN EXECUTION PLANNING BEFORE FORMAL SELECTION OF COA BY NCA	• CINC: ADJUST JOPES DATABASE • CINC: IDENTIFY MOVEMENT REQUIREMENTS • CINC: IDENTIFY AND ASSIGN TASKS TO UNITS • CINC: PUBLISH OPORD OR CONVERT COA INTO OPORD & SUPPORTING OPORDs • CINC: RESOLVE SHORTFALLS AND LIMITATIONS • CINC: INTENSIFY SORTS REPORTING • JCS: MONITOR OPORD DEVELOPMENT	• CJCS: PUBLISH EXECUTE ORDER BY AUTHORITY & DIRECTION OF SecDef • CINC: EXECUTE OPLAN OR OPORD • CINC: MAINTAIN JOPES DATABASE • JPEC: REPORT EXECUTION STATUS
OUTCOME					
• CINC ASSESSMENT THAT MAY HAVE NATIONAL IMPLICATIONS • REPORT EVENTS TO NCA/CJCS	• NCA/CJCS DECIDE TO DEVELOP MILITARY COAs	• CINC PUBLISHES COMMANDER'S ESTIMATE WITH RECOMMENDED COA	• NCA SELECTS COA • CJCS PUBLISHES SELECTED COA IN ALERT OR PLANNING ORDER	• CINC PUBLISHES OPLAN (FOR PLANNING ORDER) OR OPORD (FOR ALERT ORDER)	• CRISIS RESOLVED

Figure 3-CAP Phases by Event/Action/Outcome (DoD: CJCSM 3122.01, 2000:E-7).

Phase I-Situation Development. Phase I-Situation Development involves a combatant commander's identification of a crisis situation and subsequent pre-decision making communications with the Chairman, Joint Chiefs of Staff (CJCS). During this phase, the combatant commander reports on possible COAs, available forces, constraints on using available forces, previous actions taken, and his overall assessment of the crisis. CJCS advises the National Command Authority (NCA) in turn, and requests intelligence support as needed. There are no TPFDD processes accomplished during Phase I.

Phase II-Crisis Assessment. Phase II-Crisis Assessment is the point in the CAP process at which military action is considered by the NCA and is typified by a more intense search for specific crisis details to support the ensuing CAP decision making process. Phase II is also the point at which the Supported Commander and staff will review existing OPLANS and CONPLANS to find existing plans that might help to resolve the crisis.

Phase III-Course of Action Development. Phase III-Course of Action Development, is an iterative phase which starts with a formal decision to further develop military COAs. Generally, the beginning of Phase III is signified by the transmission of a CJCS Warning Order. The Supported Commander further develops COAs based on his most current situational estimates, and submits them to the CJCS. He does this via his Joint Planning Group (JPG), which accomplishes activities to include mission analysis, the development of the concept of operations, the development of tasks necessary to accomplish the mission, and the identification of potential forces required and available to accomplish those tasks (DoD: CJCSM 3500.05, 1999:3-II-d). "The Supported Commander staff assigns tasks to each of the components, which are then responsible to

list and prioritize the flow of force requirements to support the concept of employment. If the Supported Commander lacks the forces to accomplish the mission, the shortfall of forces is submitted to the Joint Staff and force providers as a request for forces" (Clarke, Cochran, and Kafer, 2001:3). The role of the Supported Commander's staff in this phase is to arbitrate the prioritization of requirements among the components based on the concept of operations and limited transportation assets available once the components have independently identified their requirements (DoD: CJCSM 3500.05, 1999:3-III-4). Phase III ends when the CJCS reviews and analyzes the submitted COAs and submits the Supported Commander's estimate and potential COAs to the NCA.

The COA TPFDD is first addressed during Phase III. The TPFDD is used to document and prioritize force requirements and to identify requirements for sourcing, tailoring, lift allocation, and lift scheduling (DoD: CJCSM 3500.05, 1999:3-III-1). In the TPFDD, each capability, composed of task-organized units, is described in transportation characteristics and prioritized for movement through reference to a required delivery date (DoD: CJCSM 3122.01, 2000:C-12). Planners in this phase can either modify an existing TPFDD if a suitable one exists, or develop a new TPFDD from scratch.

> (1) Creating a new COA TPFDD Using Existing TPFDD. A TPFDD already residing in the JOPES database may be modified, if required, to meet CJCS warning order and Supported Commander requirements. The non-unit data projections created during the deliberate planning process are available only for COA planning and are not used for execution. Force modules (FMs) from established OPLANs may also be used as a starting point for a new TPFDD. (DoD: CJCSM 3122.02a, 2000:B-3)

One key point to note is that the term "non-unit data" refers to notional data intended to represent real world characteristics of the real world units possessing the capabilities required by the Supported Commander. This data comes from the Type Unit

Data (TUCHA) reference file and serves only to approximate needed force capabilities in terms of weight, size, cubic volume, total number of passengers, and cargo categories (DoD: JFSC Pub 1, 2000:4-93).

> Information on movement characteristics of a type (notional) unit is contained in the Type Unit Data File (TUCHA). The acronym "TUCHA" comes from the previous name of the file, Type Unit Characteristics File. The TUCHA describes the capabilities of each type unit in narrative form and defines the unit in terms of total personnel; numbers requiring transportation; categories of cargo in the unit; weight of equipment and accompanying supplies; volume of equipment categorized as bulk, outsize, oversize, or non-air-transportable; and numbers and dimensions of individual units of equipment. The Services maintain the file and update it quarterly. (DoD: JFSC Pub 1, 2000:4-93)

The TPFDD with notional data is a predictive tool used to reserve lift space and is not executable. In other words, the Phase III TPFDD is one in which force requirements are first considered and specific forces have not yet been identified against the crisis plan. However, real COAs are being addressed at this time in the CAP process and transportation feasibility analysis is supposed to begin. Specifically, United States Transportation Command (USTRANSCOM), as a supporting command, is expected to evaluate the transportation feasibility of each COA by assessing the supportability of the listed requirements and required delivery dates against available transportation assets and throughput limitations (DoD: CJCSM 3122.01, 2000:E-13). On the positive side, if the TPFDD is developed from an existing TPFDD, at least some advance planning has been accomplished, theoretically shortening the CAP process.

While the CAP process accomplished when there is a TPFDD available focuses on deliberate plans and the use of JOPES, the absence of an existing TPFDD opens the door to the use of plans and planning tools from many sources.

> (2) Developing a New TPFDD. Where no TPFDD exists, it will be necessary to build a COA TPFDD from scratch. Planners can develop force requirements from a variety of sources, including existing TPFDDs, FMs from existing TPFDDs, on-line input, and Service-unique systems. Planners should employ, when feasible, the Joint Flow and Analysis for Transportation (JFAST) and the notional requirements generator in JFAST at this point in the process. Time permitting, sustainment lift requirements may also be estimated using the JFAST Sustainment Generator or other JOPES and Service-unique software capabilities. (DoD: CJCSM 3122.02a, 2000:B-3)

The situation in which no TPFDD exists as a basis for CAP is one in which little or no advance planning for a crisis has been accomplished. The Chairman's manuals direct that the TPFDD be generated from scratch by pooling miscellaneous sources. While they recommend some of these sources and forecasting tools, they may be Service-unique, and could be incompatible with other Services' planning tools, complicating the compilation of all but the most simple of TPFDDs. Additionally, the data generated by this process is still based on notional forces and characteristics that may only be accurate if the majority of the crisis attributes are similar, and the TPFDDs or force modules are from a recent crisis. Using existing TPFDDs from previous crises presents unique challenges that will be addressed in the next chapter.

Phase IV-COA Presentation and Selection by the NCA. Phase IV-COA presentation and selection by the National Command Authority, begins upon COA presentation to the NCA and ends upon COA selection. The Chairman of the Joint Chiefs of Staff and the NCA are the key players in this portion of the CAP process. While they are weighing the political versus military implications of the COAs presented, the Supported Commander prepares the forces under his command within the theater of

operations and continues to monitor the crisis. Supporting Commanders address the COAs under consideration by preparing to specify forces to support them.

Phase V-Execution Planning. Phase V-Execution Planning is the key CAP phase in terms of sourcing and allocation of actual versus notional forces. It is initiated by receipt of a Planning Order or an Alert Order and is terminated upon final development and approval of an executable Operation Order (OPORD). The Supported Commander issues the OPORD after review of timelines, coordination instructions, and directions of the NCA and selected COA. "JOPES procedures supporting the JPEC during CAP Phase V are extremely critical to successful execution and must be accomplished in a timely and accurate fashion" (DoD: CJCSM 3122.02a, 2000:D-1). Phase V is the most robust planning phase and is the phase in which the greatest collaboration between supported and Supporting Commanders is required. It is this point in the execution planning that the Supported Commander must coordinate with the Supporting Commanders, including lift providers to adjust the OPORD and COA. This is to ensure the best allocation of forces and sustainment for those forces, transportation feasibility, sequencing of forces, and scheduling of movements. Upon completion, each unit verifies the accuracy of its data to the next level of command. Once forces are reprioritized and phased based on accurate data, the Supported Commander verifies the force requirement is appropriate to support the concept of employment, then validates the requirements to USTRANSCOM who schedules lift assets to move the force (DoD: CJSCM 3122.02A:D-2).

The validation process is designed to ensure that the Supported Commander receives the right forces, at the right times and places, in order to effectively execute the

COA chosen by the NCA. In order to do so, validation insures that TPFDD records contain no fatal transportation (or other) errors and accurately reflect the current status, physical qualities, and availability of units required to flow into the COA. It is finally in Phase V that actual unit readiness, movement dates, and PAX and cargo details are confirmed and coordinated with actual deployable units. Since the requirements (Phase III) TPFDD represents notional force capabilities with notional transportation characteristics, the movement requirements planned during CAP Phase III are normally not close to those actually required by the deploying units (Clarke, Cochran, and Kafer, 2001:4). Validation of the TPFDD begins during the execution-planning phase and continues into actual execution (DoD: CJCSM 3122.02a, 2000:D-2).

Finally, the roles of Supporting Commanders and Service Components are to repeatedly review force requirements based upon the Supported Commander's selected COA, source force requirements, and allocate organic movements for the first seven or thirty days of deployment, (depending on the mode required). They also are obligated to establish pre-positioned support for forces based on the selected COA. The Supported Commander's Service Components' task is to source theater-based forces in the capacities required by the Supported Commander. When the Supported Commander notifies the Supporting Commanders that the COA TPFDD is ready to be sourced, they begin specifying actual units to meet specified COA requirements. Highly detailed (Level 4), actual unit data that includes information on origin, unit name and ID code (UIC), and departure loading information replace TUCHA data as Supporting Commanders and Service components respond.

> Level 4 detail enhances strategic lift allocation and scheduling accuracy and efficiency. Automated interfaces should be used to the maximum extent possible to provide actual unit movement characteristics. During this process, the Supporting Commanders identify force and sustainment shortfalls and coordinate resolution with the Supported Commander. (DoD: CJCSM 3122.02a, 2000:D-3)

Phase VI-Execution. Phase VI-Execution, starts when the NCA decides to deploy forces in preparation for execution or to execute the OPORD generated by the Supported Commander in the previous CAP phases. Validation finally occurs during Phase VI. The beginning of the execution phase is generally a CJCS execute order which updates previous CJCS messages and orders, and establishes key timelines upon which the deployment of forces will be based. The Supported Commander passes his own execute order to commanders below him, and the final adjustments are made to the initial sourced TPFDD. The Supporting Commanders also receive the execute order, and begin the movement of forces in support of the Supported Commander. Validation at this point of CAP creates some transportation problems.

> Reality indicates we usually deploy from an Execute Order. Unfortunately, it is not possible to validate requirements (even for the first seven days) to TRANSCOM for movement during phase V when there has not yet been direction or authorization to deploy forces. The problem is that, upon receipt of the execute order, the Supported Commander expects TRANSCOM to start moving forces, but nothing's been validated yet (a time-consuming process) so TRANSCOM begins throwing airplanes at known departure bases without a real schedule. The result is that things move before they are validated and the CINC loses visibility over the movement. (Kafer, 2001)

As the crisis develops, the TPFDD planning process continues in order to address subsequent increments of force and supply movements until the crisis is over and all forces are re-deployed. During the execution process, it is essential that the deploying force is identifiable and locatable while in transit, that the TPFDD flow is managed and

allocated to carriers effectively and efficiently, and that the Supported Commander's concept of operation is kept in the forefront during all CAP processes. "To be successful in this task requires a coordinated effort by the entire JPEC" (DoD: CJCSM 3122.02a, 2000:E-1).

The Role of Airlift in Crisis Response

It should be noted as a foundational argument that the nature of crisis response makes air mobility the deployment tool of choice for the first days of deployment in most joint operations. The major roles air mobility plays in the pursuit of our national military and political objectives include the core competencies of rapid global mobility and power projection. "Quick and decisive responses can diffuse crises before they escalate, deter further aggression, or in some cases, defeat an adversary before it can solidify its gains" (DAF: Air Force Doctrine Document 2-6, 25 Jun 1999). AFDD 2-6 goes on to state that the synergistic combination of air mobility assets provides the United States Air Force with a unique advantage over our sister services as well as the air forces of foreign (possibly adversarial) nations. It does so by enabling the U.S. Air Force's core competency of "agile combat support," a competency essential to sustained combat operations. Additionally, rapid global mobility is the keystone in global crisis response. The unique expeditionary nature and global reach of the Air Force empowers it to be the first at the scene of crises, whether they are of a humanitarian or combative nature. As such, air mobility can be expected to consistently be a player in crisis response and planning, and the majority of movements in the first days of the TPFDD must be tailored to fit existing air mobility platforms.

This chapter presented an overview of the joint planning processes, building blocks used in joint planning, details on deliberate planning and CAP, and briefly addressed the role of airlift in crisis response. Deliberate plans are developed to address long-term, strategic MTW concerns in specific AORs, while CAP addresses the many crises that flare up around the world. The next chapter will address some of the problems with the current joint planning processes, including difficulties with rapid force identification and allocation, the uniqueness of different crises, and problems caused by the use of notional force data in CAP.

III. Problems with the Current Joint Planning Processes

Overview

Improved processes and tools are essential to make the best use of highly constrained personnel, equipment, and low-density, high-demand air mobility assets required for rapid force projection, particularly the maneuver of early forces to the fight. Current deployment processes and tools do not support this rapid force projection requirement through an efficient use of mobility assets. "Today's joint deployment and redeployment processes normally achieve the desired results -- often through an excessive expenditure of resources" (USJFCOM:JDPO Charter, 1999:2).

The Case for Change

The joint deployment community openly acknowledges that policies, programs, and organizations for joint deployment planning and execution require greater integration to support joint deployment doctrine in a seamless manner. In an executive memorandum dated 23 October 1998, the Secretary of Defense assigned responsibility for U.S. joint deployment processes to the Commander in Chief, United States Joint Forces Command (CINCUSUSJFCOM), formally making him the "Joint Deployment Process Owner" or JDPO.

In 1999, the Chairman's goal, due to frustrations encountered during deployments over the previous ten years, was to move swiftly towards more accurate and rapid CAP. In order to do so, greater discipline in the CAP process had to be established. One approach to achieving more efficient and effective CAP was thought to be the refinement of the CAP Time Phased Force and Deployment Data (TPFDD) processes and tools. The

TPFDD is the documentation portion of the plan that covers the forces required, time phasing, and ultimately, the transportation schedule (see Appendix A-JDPO Glossary for more detailed information on the TPFDD).

> As the strategic mobility programs mature, we must better exploit the capabilities they provide. To do this we will need to improve our ability to rapidly and accurately conduct crisis action planning and the subsequent documentation of the plan in our command and control systems. We need, in particular, to improve the process for and develop greater expertise in building, validating, and sourcing a TPFDD. (CJCS Msg 022340Z Apr 99)

In theory, establishing a measurable, objective time standard would serve to set a real goal to strive for, and the processes needed to attain that goal would have to be made more efficient and effective. After careful consideration, USJFCOM identified the front end of the joint deployment process to speed CAP in order to meet the 72-hour time standard. Additionally, they focused primary emphasis on changes needed to accelerate decision-making and planning processes.

In response to the Chairman's mandate, USJFCOM recommended a 72-hour objective time standard as a target (USCINCACOM Personal For Msg 221728Z Jun 99). Subsequently, in 1999 the Chairman, Joint Chiefs of Staff agreed to CINUSUSJFCOM's recommendation for a 72-hour time standard for crisis response TPFDD development and validation of the first seven days of a deployment force flow (CJCS Msg 121300Z Jul 99).

Difficulties in Identifying Forces Rapidly and Accurately

An organization's capabilities are limited by the weakest link in the key processes of that organization. The Achilles heel within CAP is the ability to identify the forces required to support the concept of operations rapidly and accurately. While the U.S.

military has maintained formal or deliberate plans on the shelf for use in the event of major theater warfare, the types of situations it has responded to in the past decade have not necessarily had an "off-the shelf" plan. Additionally, it has lagged behind in the effective use of available planning technology due to manning and funding constraints within the DoD in the past several years. Some of this has been out of necessity as it evolved from a pure warfighting force into a more diverse role as both a peacekeeping and warfighting force. Doing more with less worldwide has repeatedly left the U.S. military in situations in which there is minimal recovery time to assimilate lessons learned between operations.

That is not to say that there is no incorporation of lessons learned from previous deployments, but that the use of past lessons learned has been a reactive rather than proactive deployment management tool. Currently, the process for identifying force requirements in support of a crisis requires the Supported Commander to pull generic force data from the Type Unit Data (TUCHA) databanks, then pass this data on to the force providers. Unfortunately, the organization and accuracy of TUCHA data does not support the rapid identification of force requirements. Because of this, Supported Commander's staffs find it more useful to reference capabilities documented in TPFDDs from previous operations, or in the case of SOCOM and CENTCOM, in TPFDDs arranged according to the most likely capabilities expected to be required (Kafer, 2001).

This presents two problems. First, because there is no common, standardized joint interpretation of what individual capabilities represent to all of the Services, force capabilities modules from old TPFDDs may or may not fit current capability requirements. Second, capabilities from old TPFDDs rapidly become outdated and

become obsolete as units and their equipment evolve over time. The lack of standardized capabilities and inaccurate TUCHA or historical data manifest themselves in greater time spent tailoring forces during CAP (USJFCOM: JDPO interview, 2001).

The Uniqueness of Crisis Operations

A common rationale for the lack of progressive evolution in crisis planning is that reactive, crisis-induced planning is necessary in CAP since each operation has been unique unto itself, from small-scale non-combatant operations in Africa to major regional conflict in the Balkans. Additionally, it is a Supported Commander's prerogative to identify a capability requirement to meet the needs imposed by a specific contingency or conflict. Both of these statements are correct to some degree, but the first is disputable. Though the operations were unique, it is highly probably that they required some similar capabilities. Failure to assess these common capabilities when planning for crises leads to reinvention of plans that might have been previously executed, resulting in duplication of effort.

In situations requiring the use of constrained resources with minimal recovery time between commitment of those resources, duplication of effort serves to magnify the negative pressures already associated with those situations. Therefore, it makes good sense to assimilate lessons learned from operations of the past, efficiently centralize a directory of capabilities, and streamline the flow of information during deployment planning. Past operations have highlighted many specific force capabilities that can provide great utility to a Supported Commander in a wide range of sizes of operations and levels of hostility, and those lessons must be centrally assimilated.

Specific CAP Challenges in the Past

Some specific examples of challenges faced in the deployment of U.S. forces during the Crisis Action Planning Process are as follows:

- Operation JOINT ENDEAVOR. During the initial Bosnia Deployment in December 1995, there were great challenges in determining correct aircraft loads for equipment and personnel because the TPFDD was inaccurate. One of the leaders of that operation stated, "we gnawed our way into Bosnia." (CJCS Message 022340Z Apr 99)

- Operation DESERT THUNDER. The TPFDD validation process is unnecessarily sequential and time consuming. There was no TPFDD available when needed. (McDaniel, 1998)

- Operation JOINT GUARDIAN. The identification and validation of force requirements was not completed prior to the start of deployment into Kosovo. (CJCS Message 022340Z Apr 99)

- Exercise TEMPO BRAVE 93. Theater contingency planning by CJTF staffs took excessive time for critical response scenarios such as non-combatant evacuation operations and humanitarian assistance/disaster relief. The after action report recommended that TPFDDs be built in advance to source the most likely units to be tasked. (USPACOM, 1993)

- Exercise UNIFIED ENDEAVOR 97-1. The joint force staff had difficulty developing TPFDDs. In some cases, courses of action were selected before they had been tested for transportation feasibility. During execution, these problems impacted on the JTF's ability to get the right forces, with the right equipment, in place in a timely fashion. (Brosk, 1996)

- Operation UPHOLD DEMOCRACY. Commanders identified that the current process of adjusting TPFDDs is not responsive to short-fused emergent requirements. The system is exceptionally manpower intensive and non-responsive by today's technological standards. As a result, personnel at all levels of command made innumerable phone calls, hand-massaged TPFDDs, and commands required increased manning to support operations and to make accurate and timely in-transit visibility of forces and sustainment. (Shadley, 1994)

- Exercise ELIGIBLE RECEIVER 92-1. During Course of Action (COA) development, time sensitive situations dictated that planning be significantly compressed. As a result, USTRANSCOM or the USSOUTHCOM components did not have adequate time to evaluate the proposed COAs. Thus, USSOUTHCOM recommended a COA to the Joint Chiefs that offered the best military solution, but may not have been executable. (Balash, 1992) (Lessons learned excerpted from Clarke, Cochran, and Kafer, 2001: 7)

These cases clearly illustrate that the up-front crisis action processes of today's and tomorrow's militaries must be accelerated and de-conflicted to remain viable for rapid force projection responses to crises in an increasingly expeditionary environment. "An efficient and effective deployment process is even more critical during crisis action planning. During a crisis one does not have the luxury of a deliberate plan that includes a detailed Time-Phased Force and Deployment Data (TPFDD) ready for action" (DeLapp, June 2000:2). "Given the great level of detail required to coordinate a large deployment, the rapid generation of the deployment data to support a quick reaction operation such as ALLIED FORCE is a monumental task" (Kosovo After-action Report, 1999:34).

JDPO analysis early in the process of assessing current deployment capabilities highlighted a CAP TPFDD development process that takes days or weeks. They formalized this position in June of 1999. "In view of these shortcomings, inputs from the JPEC suggest that the present deployment process, systems, and enablers can support level IV TPFDD production in 108 hours (four and a half days), given clear guidance from the Joint Staff and Supported Commander" (CINCUSACOM msg 221728Z Jun 99). This graduate research project will show that a JTF/CC should have a plan and pertinent planning tools available for rapid source selection and tailoring to make the task of joint deployment more efficient and manageable. It will do so by showing that the

combination of having such plans available, integrated with a Joint Force Capabilities Register, can enable more rapid identification and validation of force requirements in a TPFDD with the first seven days of movement within a 72-hour time period.

Problems with Notional Force Data in the Crisis Action Planning Process

The current CAP process is too slow, sequential, and reliant on notional force data. Doctrinally, the steps in the CAP process, when accomplished quickly and efficiently, seek to "provide for the rapid and effective exchange of information and analysis, the timely development of military Courses of Action (COAs) for consideration by the National Command Authorities (NCA), and the prompt transmission of NCA decisions to Supported Commanders" (DoD:CJCSM 3122.01:E-1). However, the inability to accomplish rapid planning based on real forces early in the CAP process, current planning tools and processes that are not sufficiently collaborative, and a lack of standardized force capability specifications across the Services lends to great inefficiency in the CAP process. The main issues that will be addressed below are the lack of collaboration and the weaknesses of using notional forces from the TUCHA reference files in the CAP process.

Joint doctrine specifies the importance of communication between the respective commands during CAP through the use of messages, news groups, and data exchange. Unfortunately, the rapid pace of CAP or the sensitive nature of the crisis often force Supported Commander planners to create plans with insufficient input from other commands, especially those residing in widely dispersed geographic locations. Joint doctrine also specifies that following COA development, the Supported Commander is

required to send an Evaluation Request Message to the components and following their Evaluation Response Message, a similar message to USTRANSCOM for an evaluation of transportation feasibility (DoD:CJCSM 3122.01:G-C-3). This sequential planning is contrary to the intended focus of the CAP process on rapid decision making, making it unsuitable for real-world crisis operations where a quick response is required.

The dependence on notional data during Phase III of CAP COA development exacerbates the current, sequential, deliberate nature of the process. TUCHA data is intended for use as a reference for deliberate planning that helps planners match required capabilities to the operational TPFDD to identify requirements. Its use in the CAP process is simply the adaptation of an existing process (deliberate planning) to a functionally similar accelerated planning process. The real question that must be asked, then, is whether or not it is the best process to adapt for CAP.

The use of notional data can be very useful as a functional placeholder to allow planners to estimate forces in the early phases of the CAP process. However, the transition from Phase III-COA Development to Phase V-Execution Planning becomes disjointed and awkward, as TUCHA data must be completely replaced with real force data during sourcing. The problem is worsened when the TUCHA does not accurately represent the forces that will provide the needed capability when the TPFDD is sourced in Phase V.

> …TUCHA data is an approximation of a generic unit and very few units are actually organized according to the notional reference files. For example, TUCHA identifies an infantry battalion, but does not provide data on a specific unit such as the 2nd Battalion, 11th Infantry, which has its peculiar personnel and equipment characteristics. Additionally, the services have not maintained the accuracy of the TUCHA. (Clarke, Cochran, and Kafer, 2001: 6)

During the CAP process, the Supported Commander selects desired capabilities required to support a COA. The TPFDD is organized to support a given COA by tasks to support those capabilities selected by the Supported Commander. TUCHA, because it is designed to support deliberate planning, is organized by function. Therefore, to build a TPFDD which accurately reflects taskings needed to support the COA, a planner has to cut and paste bits and pieces of TUCHA data from the different functional units to make a single, effective, crisis response unit. Unfortunately, because the TUCHA data is inaccurate and is not updated regularly by all Services, this method is still ineffective, as it is not until Phase V-Execution Planning, that TUCHA errors are removed and replaced with real force data.

The reality of the CAP process is that planners tend to rely on old TPFDDs from previous operations to cut and paste capabilities rather than rely on inaccurate TUCHA data. The problem is that the uniqueness of each operation, differences in Supported Commanders and their planning staffs' objectives, and the use of UTCs that are not jointly standardized and regulated makes old TPFDDs less than perfect for adaptation to current crises. The end result in this case would be the same as the end result of using inaccurate TUCHA data during Phase III-COA Development: extensive tailoring during Phase V-Execution Planning requiring extra time in the CAP process. While the time spent on tailoring may not seem to be much relative to the whole process, there is a whiplash effect on subsequent planning functions. The transportation allocation process is the main area that is affected, as efficient, effective scheduling is directly dependent on a cohesive, transportation validated plan during crisis.

Because the CAP TPFDD process caused duplication of effort, lack of timeliness in crisis planning, and ineffective use of automation in the CAP process, in April 1999, the CJCS ordered the JPEC to analyze the CAP process in order to move towards the more rapid and accurate documentation of force requirements in the TPFDD (CJCS Message 022340Z Apr 99). Their analysis resulted in the discovery that a crisis TPFDD without significant deviations would require approximately 108 hours to complete. Chairman, Joint Chiefs of Staff, General Shelton asked United States Joint Forces Command (USUSJFCOM) to recommend an appropriate TPFDD development time standard. The standard was to establish a criteria for the time allowed from notification of a NCA COA decision to completion of a validated, "level four detail" TPFDD for the first seven days of the mission (Kafer, Mordente interview, 2001). General Shelton later approved USUSJFCOM's recommendation for an objective 72-hour TPFDD development and validation time standard to focus improvement efforts.

Chapter III provided an overview of some of the problems with the current joint deployment processes, making the case for setting a TPFDD development standard and improving the current CAP processes and tools. The current CAP processes preclude rapid force identification and allocation, and problems caused by the use of notional force data cause excessive delays in CAP. Chapter IV will address the 72-hour objective TPFDD standard proposed by USJFOCM, and detail the initiatives intended to be implemented to resolve the problems previously mentioned.

IV. The 72-Hour TPFDD Standard

Overview of the 72-hour TPFDD Objective Time Standard

Senior U.S. leadership has openly recognized the need for improvement in the deployment process in their efforts to streamline the processes and assign responsibility for joint deployment efforts. Over the past decade, senior military leadership has grown more concerned about the inefficiencies and duplication of effort within the joint deployment processes of the military. Because of these concerns, Secretary of Defense (SECDEF) William Cohen, in a memorandum dated 23 October 1998, assigned the Commander in Chief, United States Joint Forces Command (CINCUSUSJFCOM), formerly Atlantic Command (ACOM), responsibility as the Joint Deployment Process Owner (JDPO) for the United States military. In a message to CINCUSUSJFCOM, the Chairman, Joint Chiefs of Staff stated, "...We will need to improve our ability to conduct crisis action planning and the subsequent documentation of the plan.... To focus our efforts, I propose establishment of a TPFDD development time standard….I do not know if this time standard should be hours or days, but it certainly cannot be weeks" (CJCS message 022340Z Apr 99).

In his June 1999 response to the Chairman's message, CINCUSUSJFCOM, as the JDPO, after consulting with the Service Chiefs and Combatant Commanders in Chief, proposed a 72-hour time standard for crisis response TPFDD development and validation. In CJCS message 121300Z July 1999, the Chairman accepted the 72-hour TPFDD objective time standard for building and validating the first seven days of the TPFDD, stating that emphasis should be placed on changes needed to accelerate decision-making,

planning and execution processes. USJFCOM has identified the front end of the deployment process as the portion that offers the best chance of reducing time spent in the deployment processes, enabling the possibility of a 72-hour TPFDD. "According to the message, when a crisis occurs, and following a start time designated by the Joint Staff, planners have 72 hours to develop and validate a TPFDD for the first seven days of the crisis. As the situation dictates, planners may have more time to build a TPFDD, however the capability of meeting a 72-hour standard must exist" (DeLapp, 2000:4).

The need to have a 72-hour TPFDD capability was formalized in the Chairman's most recent update to planning guidance as follows:

> (1) The time standard shall be 72 hours from notification and receipt by the Supported Commander to validation of TPFDD-level 4 detail-for the first 7 days of the mission. (Note: Based on Supported Commander guidance, assets deploying from origin to destination on unit organic transportation may not require level 4 detail.) (DoD:CJCSM 3122.02a, 2000:B-3)

CINCUSUSJFCOM Responsibility for Deployment Process Improvement

The responsibilities for improving the joint deployment processes were formalized in the charter developed by USJFCOM detailing the joint deployment process and the specific responsibilities assigned to the key players in the process. CINCUSUSJFCOM was designated as the Supported Commander for the purpose of improving the deployment and redeployment processes and was assigned responsibilities for all deployment-centric tasks. CINCUSUSJFCOM is charged with the responsibilities depicted in Figure 4.

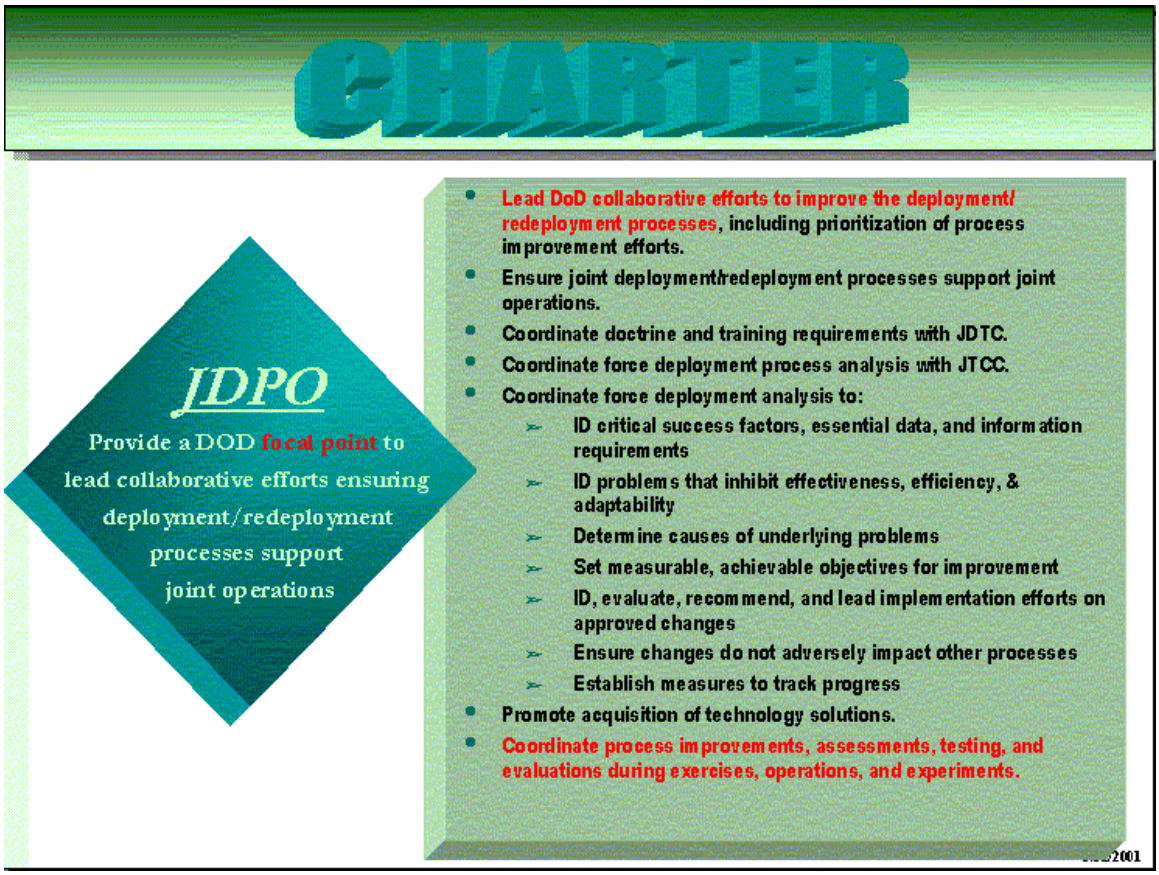

Figure 4-USJFCOM JDPO Responsibilities (USJFCOM/JDPO JFSC Brief, 2001:5; USJFCOM/JDPO Charter, 1999:5)

Based on figure 4, it is evident that CINCUSUSJFCOM is basically responsible for everything having to do with the joint deployment process including diagnosis of problems, setting procedures, systems development and integration, training, and capability measurement. In essence, USUSJFCOM J4 JDPO is responsible for the entire joint deployment process, and has a vested interest in finding better ways to deploy forces. The Charter for the USJFCOM Joint Deployment Process Owner (JDPO) states the DoD's position best by stating, "The Department of Defense is committed to developing seamless joint deployment and redeployment processes. Recent force structure reductions, decreased forward presence, reduced funding, and high operations

tempo are key factors that require effective joint deployment and redeployment processes to become more efficient" (USJFCOM:JDPO Charter, 1999:2).

JDPO Alternatives under Consideration

In order to meet the Chairman's 72-hour TPFDD standard, USUSJFCOM JDPO decided to pursue four initiatives that should collectively assist in meeting that goal. They are 1) A common starting point for the 72-hour TPFDD (CINCUSACOM Msg 221728Z Jun 1999), 2) Concurrent Collaboration, 3) Force Capabilities Packaging via the Joint Force Capabilities Register, and 4) common integrated joint deployment systems and procedures. These initiatives are not considered to be the only ways to enable rapid global mobility, but represent the main CAP initiatives being pursued by the USUSJFCOM Joint Deployment Process Owner. A brief overview of these initiatives is presented below.

Revised JOPES Orders Process: A Common Starting Point

The JDPO's first initiative was to establish a common starting point for the 72-hour TPFDD objective standard. It was decided that a formal point in the process had to be designated in order to track any time standard that might be used in enabling more rapid crisis planning. The excerpt from the CJCS manuals below describes the terms and conditions of the point chosen as the starting point for the 72-hour TPFDD.

> (2) The notification from which performance in meeting the time standard can be tracked will be a duly authorized CJCS order (e.g., alert, deployment, etc.) after the NCA approves a COA. The specific type of order will be situation dependent. Regardless of the type of order, the coordination instructions within the order will:
> (a) Direct TPFDD development and unit sourcing to meet the approved COA.

> (b) Indicate the start of the 72-hour period to develop a level 4 TPFDD and validate the first 7 days of the mission. Start time will be provided as a date time group (DTG, xxxxxxZ MMM YR) to allow transmission and receipt of the message by the Supported Commander prior to start of the 72-hour period. Should a mission change occur requiring development and approval of a new COA, the 72-hour requirement will be reset pending the Supported Commander's receipt of new COA. (DoD:CJCSM 3122.02a, 2000: B-3)

Concurrent Collaboration during CAP

The JDPO vision on the use of collaborative planning tools describes the concept as "Staffs using computer-based tools to share information, communicate, and plan across geographic boundaries" (USJFCOM: EUCOM TDEC slides, 2000:12). The collaborative planning process is specifically directed at the planning processes of COA development, sourcing and tasking of units, and verification and validation of deployment data. The idea behind concurrent collaboration is the use of collaborative planning tools to enable staffs to speed the planning process by using computer-based tools and advanced communications technologies to make the CAP decision processes less sequential in nature.

"Collaboration technologies are software products, such as Information Workspace, Odyssey, or Microsoft's NetMeeting that allow users from geographically disbursed locations to "meet" in a virtual environment through the use of desktop computers" (Clarke, Cochran, and Kafer, 2001: 10). The results of deployment exercises such as Millennium Challenge '00 show that collaborative planning is very valuable in reducing the number of planning cycle iterations in addition to enabling earlier decisions. As with any new initiative, there are problems to be addressed. These include sensitivity to data accuracy, integration with all players in the process, including JOPES users, and

failures to implement the collaborative tools in some phases of planning. Figure 5 illustrates the concurrent collaboration concept.

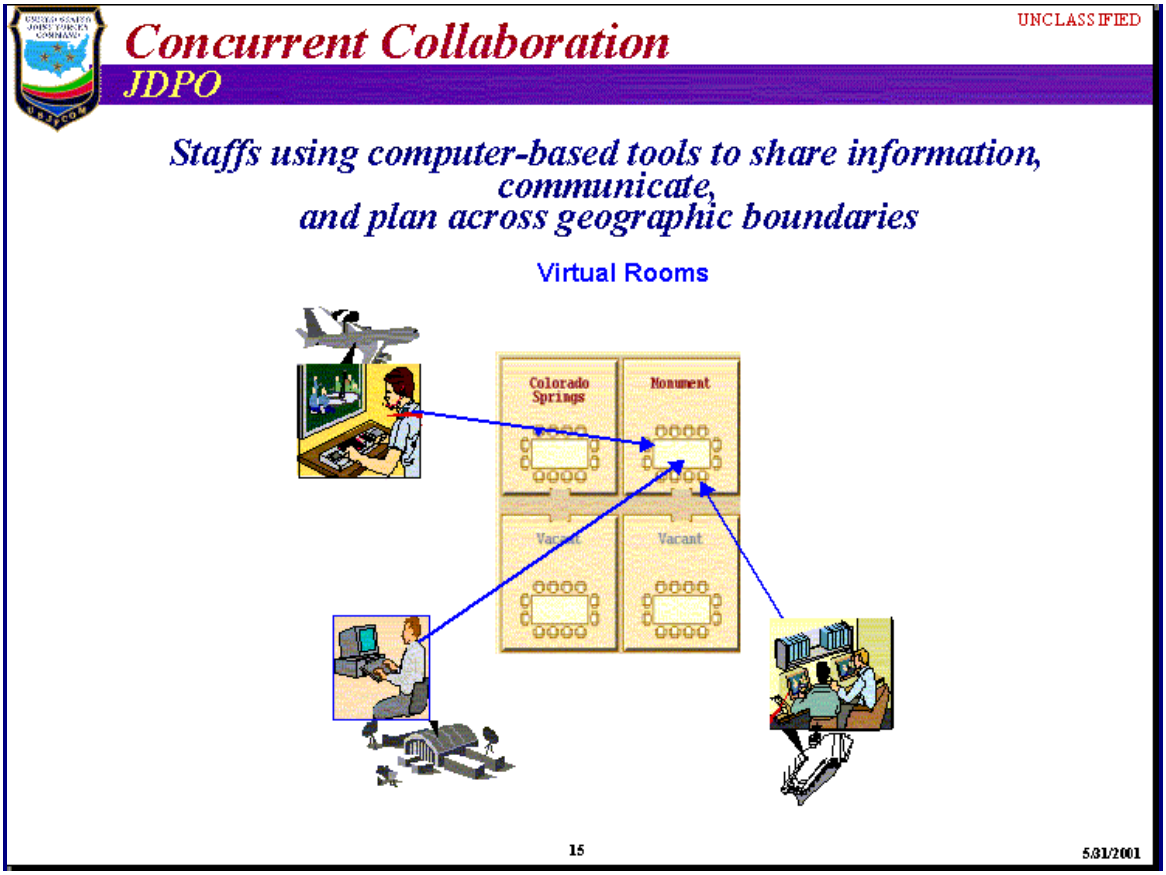

Figure 5-Concurrent Collaboration (USJFCOM/JDPO JFSC Brief, 2001:5).

Previous Research on Collaborative Planning Tools

"John DeLapp's June 2000 research report provides a background on the crisis planning problem, and details the development of the 72-hour TPFDD building and validation time standard" (DeLapp, 2000). He addresses the solution to the timeliness problem from the collaborative planning tools perspective rather than the process improvement perspective. The key premise of his GRP is that the sequential nature of traditional crisis planning is counterproductive to effective, efficient crisis planning.

DeLapp references the inapplicability of deliberate planning for crises due to the short term nature of crisis planning and the excessively long, sequential nature of planning for major theater warfare (DeLapp, June, 2000). He clearly highlights the importance of parallel, collaborative communication in the streamlining of the joint deployment process by referencing case studies on the U.S. Navy, as well as companies such as John Deere and Company, IBM, and Ford Motor Company.

DeLapp's research illustrates the utility of focusing time reduction efforts on the "up-front processes" such as the planning process from JCS warning order to validation of the crisis TPFDD for the first seven days of deployment. The primary benefit of using collaborative tools is that instead of upward and downward coordination through constrained information pipelines, each key process can be coordinated via numerous, parallel information pipelines, expediting the completion of each process. DeLapp bases his arguments on timesavings derived by the collaboration of the key players during the sourcing and tailoring processes (designation of units and unit determination of which equipment to deploy with).

My research will complement DeLapp's research by showing that crisis advance planning integrated with the JFCR can eliminate large pieces of the existing process, and significantly reduce the time spent in areas benefited by collaborative tools and processes.

Standardization of Integrated Joint Planning Systems and Procedures

The JDPO realized that a joint standard for the input of actual unit data, consistent tailoring procedures, and common, integrated planning tools were essential to joint

deployment success. A joint standard would allow them to capitalize on the use of collaborative planning tools and more efficient planning tools such as the Joint Force Capabilities Register (JFCR). Currently, the different Services use different software utilities to feed deployment information into JOPES.

> There are no uniform/joint requirements for deploying units to precisely identify movement requirement data to Supporting CINCs prior to deployment. Data is often outdated or incomplete which prevents rapid transmission into JOPES. Most importantly, except for the USMC, deploying chains of command do not use consistent procedures for making changes during force tailoring and deployment. (USJFCOM:JDPO Point Paper, 2000:2)

A standard process for data input does not currently exist. "JDPO recommended that units (Brigades, Wings, Squadrons, Battalions) input actual deployment data, employ consistent procedures for sourcing and tailoring, and utilize a "joint" force generator, or feeder, into JOPES. In 1999, the Joint Requirements Oversight Council made the decision to use TC-AIMS II and JFRG II as the interim deployment information systems to push data into JOPES" (USJFCOM: JDPO Point Paper, 2000:2).

The need for integrated, joint processes and procedures was highlighted recently as the lack of a common data format has come to light as a serious problem within the JPEC. The Air Force uses a data standard based on NSN numbers and adds special identification numbers to differentiate items from one another. The Army uses LINs (line item numbers), while the Marines and Navy use another data standard. The problem is the lack of a common data standard. The automation is removed from the planning process, causing data dropout as information traverses the different information systems to JOPES. As the unit level user of TC-AIMS II inputs data that travels through the JOPES feeder system JFRG II into JOPES, he or she can only be assured that one percent

of the data entered will make it into JOPES without additional manual input (Mordente interview: 2001).

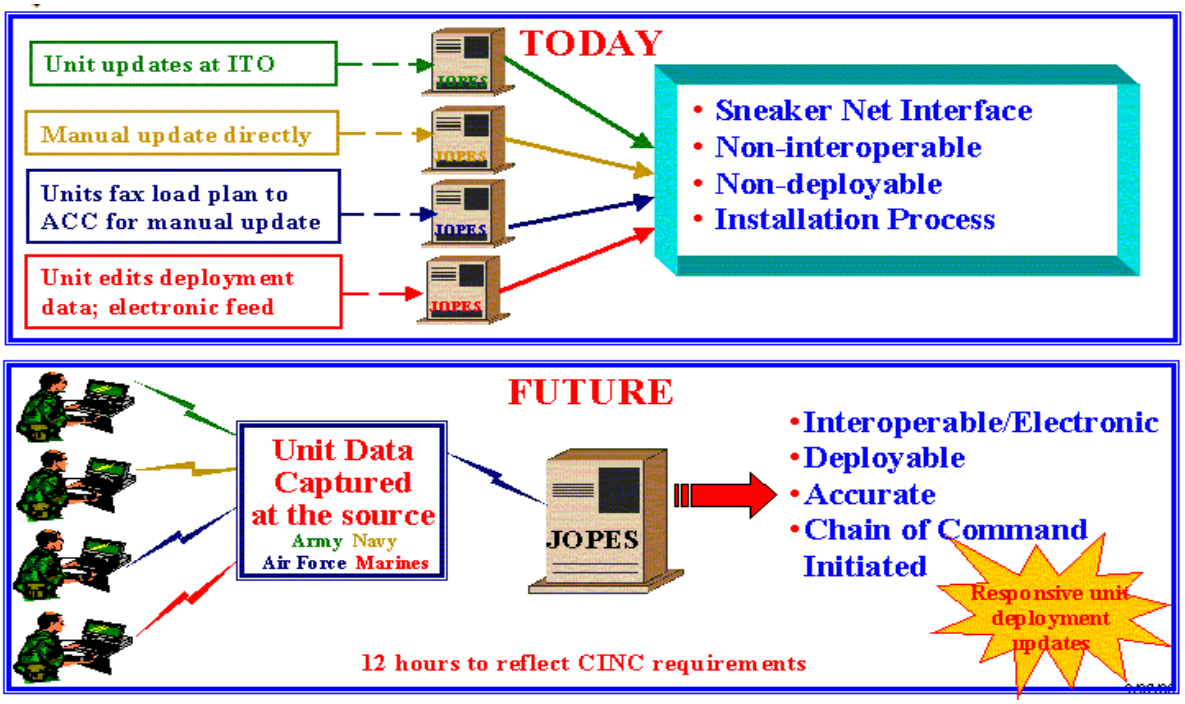

Figure 6-JOPES Data Input (USJFCOM: JDPO EUCOM TDE slides, 2000:15).

Joint Force Capabilities Register

As discussed in Chapter II, current COA development relies on notional unit data. This creates a situation in which valid transportation feasibility estimates are difficult to arrive at due to inaccurate or non-existent deployment data. The end result is that the validation of actual forces that must deploy is delayed during a critical time period. As the process owner for joint deployment, "JDPO recommended the use of force capabilities packages from which Supported Commander planners could rapidly identify and sequence required capabilities during COA development. Force provider

Components would build the joint-required capabilities from actual unit, level-four detail, data" (USJFCOM:JDPO Point Paper, 2000:2).

The use of actual versus notional data and the early collaborative involvement of all planners involved in CAP would speed the CAP process. Using actual data would provide a solid basis for accurate, timely identification of forces and transportation feasibility analysis during COA development and more rapid verification and validation of deployment data. The next chapter will expand on the use of the JFCR, and the notion of using planning shells built upon force capabilities required for specific operations as an integral part of the JFCR architecture. The JDPO envisions the CAP process that appears in Figure 7.

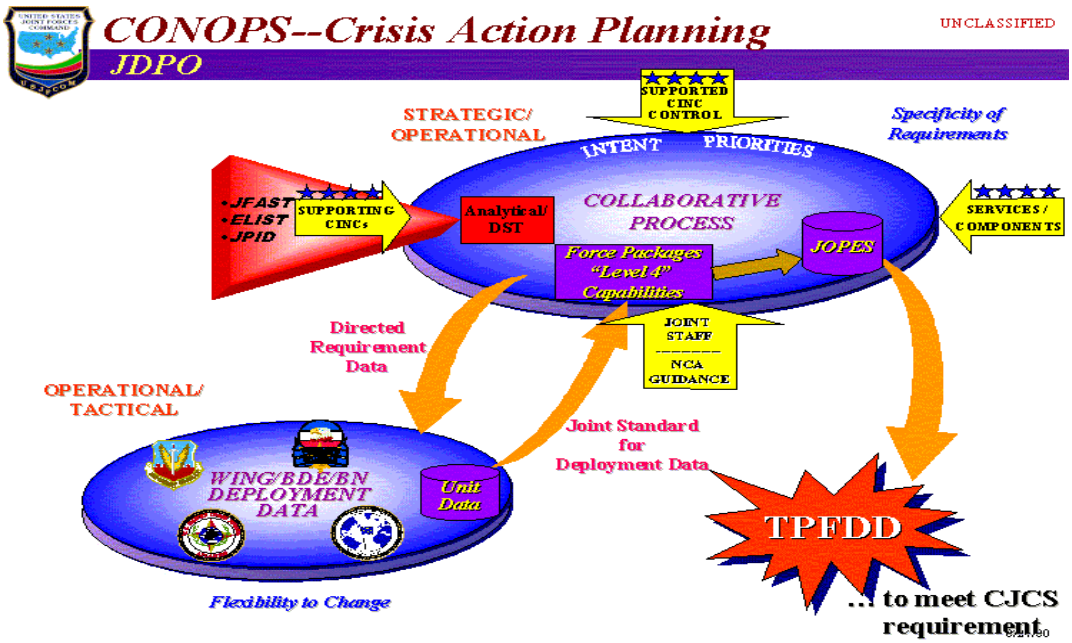

Figure 7-JDPO Concept for CAP Processes (USJFCOM/JDPO: 2001).

Chapter IV detailed the evolution of the 72-hour objective time standard for the building and validation of the first 7 days of force flow in a crisis deployment. The JDPO identified four key process improvement areas to speed the CAP process and enable the

72-hour TPFDD, including establishing a common CAP starting point, using concurrent collaboration, standardizing joint planning systems and procedures, and the implementing the JFCR. Chapter V will expand upon the JFCR concept and the benefits of planning in advance of crises. It will also address the subjects of capability overlap and common required capabilities for crisis response.

V. Advance Planning and the Joint Force Capabilities Register

JFCR: Overview and Rationale

None of the initiatives considered by the USUSJFCOM JDPO is a stand-alone alternative. Concurrent collaboration, the use of accurate force capability packages, and the standardization of planning tools and procedures, offer significant potential to speed the CAP process. While the standardization of planning tools and procedures and the use of collaborative tools should be considered prerequisites to effective planning, a well developed, integrated JFCR offers some of the greatest potential for progressive change.

The JDPO is considering a JFCR concept that is similar to a "force module" construct. Joint Publication 1-02 defines a "force module" as a grouping of combat, combat support, and combat service support forces, with their accompanying supplies and the required non-unit re-supply and personnel necessary to sustain forces for a minimum of 30 days. The elements of force modules are linked together or are uniquely identified so they may be extracted from or adjusted as an entity in the Joint Operation Planning and Execution System databases to enhance flexibility and usefulness of the operation plan during a crisis (DoD: JP 1-02, 2001:165). The concept of building force modules in JOPES is common. In fact, it is often a preferred method of linking specific units to their functional orientation.

Doctrinally, force module packages are defined as force modules with a specific functional orientation that includes combat, associated combat support, and combat

service support forces (DoD: JP 1-02, 2001:166). However, the key difference between the current thought on force modules and the direction envisioned by the JDPO is that the force capability packages should consist of actual unit information rather than TUCHA data, as mentioned previously. Additionally, units often build force modules in advance for reference during crisis, but there is no standard format and the data is not available to Supported Commander staffs (Hymes Interview by Clarke, Cochran, and Kafer, 2001: 12).

USUSJFCOM defines its Joint Force Capabilities Register as "a planning reference that lists capabilities, supported by actual unit data, available to Supported Commander planners for mission analysis, COA development, and force selection to fill a mission in response to a crisis" (USJFCOM:JFCR, 2001:2-1). The JFCR concept espoused by the JDPO is "based on packaging force capabilities with all required assets needed to deploy, including needed logistics and sustainment requirements" (Kafer, 2001). Conceptually, it moves away from the use of TUCHA data, and emphasizes force packages that can be easily tailored to meet evolving crises. The JFCR is to be supported by automated, advanced technologies, and is intended to merge accurate unit data originated from its source with capabilities based requirements via data links. It will also incorporate unit readiness ratings.

> An effort to redefine units into capabilities maintained with actual unit data is required among all services. Then, joint planners must have access to the task-organized capability packages during planning. When a Supported Commander is defining force requirements during CAP, his staff can quickly tailor pre-defined, commonly understood, force capability packages to the situation. The force capability packages would contain the accurate transportation data required for transportation feasibility analysis. (Clarke, Cochran, and Kafer, 2001:13)

One capability being examined for use in the JFCR resides in a planning tool called JADE that searches old TPFDDs for FMs that represent required capabilities in order to more rapidly identify forces and speed the CAP process. The intended purpose of JADE is to speed the development of force deployment plans and reduce response time in a crisis situation using a user-defined casebase and generative planning. It is based upon an easy to use, map-oriented drag & drop interface (USJFCOM: JDPO, 2001:37). The JFCR will continue to evolve in the upcoming months and years, and eventually, the JFCR will serve to accelerate CAP and make joint deployments much easier and smoother for all parties involved in the process.

JFCR Challenges

There are several hurdles to overcome in the implementation of the JFCR and JFCR enabling functions such as collaborative planning tools. These hurdles can be roughly categorized into two categories, institutional, and physical difficulties in implementation.

Institutional Challenges. The large bureaucracies associated with the U.S. military make it difficult to implement change on anything but an incremental basis. Consensus can be difficult to come by in a large conglomeration of separate organizations like the Services when the change may involve disparate levels of change for the different stakeholders. The Air Force has already taken the initiative to standardize some UTCs and work on assessing capabilities in support of the AEF concept (Valle, 2000:23). The Army and Marines have not necessarily evolved as far, so they will likely have to spend more energy to get to a common basis in data and procedures.

Another difficulty associated with the JFCR is that commanders of the different theaters and the Services would have to agree upon specific capabilities for use in force packages. However, the lack of staff agreement over the structure of the capabilities, control of the register, and workload required to maintain accuracy within a JFCR database that would serve users at all levels has hampered efforts to implement a near-term capability without automation.

Differences between the Services on Capabilities Packaging. One of the major obstacles to an effective, joint register or force capabilities database is the difference in the way each Service arrives at a deployable force. The Air Force method of addressing deployments lends itself most easily to efficient and effective adaptation to the JFCR. The Air Force is able to specify UTCs down to a very basic capability level, and each Air Force unit possesses relatively unique capabilities. At the most basic level, a C-130 squadron has the capability to do tactical airdrop or theater airlift. A block 40 or 50 F-16 squadron can be used for a variety of missions, but specializes in nighttime ground attack. The Air Force operates standard packages whenever possible and formulates tactics and procedures to support this way of operating.

The Army, on the other hand, does not specify standard packages in advance. "The Army ties units to UTCs, versus capabilities. For example, an Army transportation company would be represented by a UTC. However, no two transportation companies have the same equipment and they do not deploy as they are represented in the UTC" (Kafer, 2001). The authority for building a force package is delegated down to the ground commander of the force that deploys to fight. The Army maintains nearly

unlimited flexibility to build capabilities packages on the fly, and can tailor a package to meet nearly any needed capability. Unfortunately, the cost of this capability is time.

The Marines operate similarly to the Army, but have more "ready made" capabilities available. "Marines are more standardized between units than the Army. An infantry company in one location looks just like an infantry company in another location. This is easy to do when you are small" (Kafer, 2001). The Navy at sea does not suffer as badly from deployment planning issues, as many of their forces are already deployed and maintain a set of capabilities to respond to crises once they set out to sea. Some exceptions include heavy engineering units and the increasing forward deployment of some Navy aviation units. "SEABEES almost never go by sea and they are heavy. EA-6Bs are more frequently deploying land-based like the Air Force" (Kafer, 2001).

Sourcing Issues. There is a concern within the Services that if level IV unit-detail information is available to Supported Commanders, there might be a tendency to select actual units rather than required mission capabilities (Clarke, Cochran, and Kafer, 2001:15). Supported Commanders might select units based on reputation or other non-mission criteria. Any future JFCR will have to address this important concern.

Security Issues. The nature of the flow of deployment data from secure operational level systems such as JOPES and Global Command and Control System (GCCS) to unclassified unit level systems presents future JFCR challenges. The crisis plan is secret, but pieces of unclassified movement data from the plan must be disseminated to civilian contract carriers without secure data channels in order to execute the plan.

More specifically, certain aspects of the planning process render portions of deployment data secret. Any time actual unit data is merged with the location and the time of a deployment or an employment, that data becomes classified as secret. The current process facilitates the computer-based importation and exportation and classification and declassification of data by using JFRG II and TC-AIMS II to filter data, transfer it from JOPES to units, and transfer it back from units into JOPES. During sourcing and tailoring, JFRG II strips out the JOPES ID as it pulls out unit requirements to make data unclassified for use at the unit or field level (USJFCOM/JDPO web site document: 2001:3). Then the unit takes the declassified data and tailors it, then re-inputs it into TC-AIMS II. TC-AIMS II feeds the unit data back into JFRG II, which reattaches out the JOPES ID using "air-gap" procedures, then feeds the classified data back into JOPES (USJFCOM/JDPO web site document: 2001). The important thing to note is that there is not a direct electronic link between the classified and unclassified electronic systems. In order to change data from classified to unclassified and back, data must be "air-gapped". "Air-gapping" is the transfer of data via "sneakernet" or manual delivery between planning systems. This is another manual process in a planning process that depends on automation to be effective and efficient.

Too Many Tools, Not Enough Time. Finally, there are serious concerns about adding more tools and processes to a planning environment in which the tools and processes we currently use are not updated or optimally used. The reduction in staffs at all levels has resulted in a "do more with less" mentality in a work environment that is increasing in complexity and intensity. The end result of such under-manning and over-tasking is that something must give. Often the item having the greatest complexity, lack

of user-friendly interfaces, or that appears redundant is the item that is foregone. This is evidenced by TUCHA data that does not accurately represent actual unit data. In order for a database of actual unit capabilities to exist, someone must build it, update it, and administer it. Units are busy enough with training, deployments, and the performance of their own support activities. These duties are in addition to the regular reporting of readiness and training status via Global Status of Resources and Training System (GSORTS) and wing level meetings. Staffs are undermanned and over-tasked as well. However, in order to deploy more rapidly in a joint expeditionary context, change is required. In order for change to be effective, planning tools such as the JFCR and collaborative planning tools must be user-friendly, serve to reduce work and time spent, and facilitate rapid, flexible planning for CAP.

Advantages of Advance Planning for Crisis

Joint Publication 3-35, Joint Deployment and Redeployment Operations, refers to the use of deliberate planning as a supporting part of the CAP process. It supports CAP by "anticipating potential crises and developing joint OPLANS that facilitate the rapid development and selection of a COA and execution planning during crises" (DoD: JP 3-35, 1999:A-2).

Webster's Ninth New College Dictionary defines the word "deliberate" as follows: "…1: characterized by or resulting from careful and thorough consideration 2: characterized by awareness of the consequences 3: slow, unhurried, and steady as though allowing time for decision on each individual action involved…" (Webster: 1987). This definition might suggest that deliberateness has no place in a crisis. On the other hand,

imagine a crisis which had been considered to have a high probability of occurrence, and had therefore been examined from several different angles well in advance of its occurrence. Such foresight and study can enable a Supported Commander to take a more careful look at potential courses of action, and enable him to offer a timely, pertinent response which might avert deeper crisis.

One of the biggest challenges in any crisis is the "Fog of war" that clouds and complicates effective decision making by prompting uninformed and potentially costly decisions as a time-critical situation unfolds. One benefit of advance planning is a reduction in the likelihood of making decisions based on false information or pursuing unwise courses of action. Without the "fog of war," one can test and retest assumptions and conclusions for validity as the effects of time-criticality are somewhat removed from the equation. It is much easier to catch critical errors in assumptions and courses of action when one's hair is not aflame.

However, the adaptation of deliberate planning to CAP in its current form is not flexible enough to truly accelerate the CAP process. In fact, the use of notional data may actually degrade CAP, as notional data is replaced with real unit information. The current method might not be perfect, but if the tools of advance planning can be made more flexible and responsive to changing crises, the concept of advance planning for crises makes perfect sense.

Planning in Advance of Crisis: Assumptions

There are several assumptions that must occur for advance planning in this manner to be feasible, considering staff manning constraints. One key assumption is that

even though each crisis is unique in many ways, crises of similar types have similar deployment footprints in the initial deployment phase. If this assumption is true, it can be argued that instead of utilizing multiple plan shells to streamline the crisis action planning process, it might only be necessary to develop a few crisis action plan shells representing responses to operations of increasing size and hostility level. Another assumption is that crises, by their volatile nature, demand a flexible capability in order to rapidly address crisis changes. Therefore, planning tools which feed a plan shell for crisis sourcing data must be kept up to date with actual deployable forces catalogued and organized efficiently by capability. Finally, any tool that is to serve effectively in the CAP process must be flexible, easily adaptable, and easy to operate at all levels from the unit to the CAP planning staffs. A capability to plan rapidly, in a collaborative environment, using actual forces might be especially valuable and important when a crisis evolves so quickly that it confounds the doctrinal processes and traditional technologies.

> In a fast-breaking crisis, CAP procedures can be significantly compressed and steps overlapped. Further, a crisis can be so time critical, or a single COA so obvious, that the first written directive might be a deployment or execute order. In these cases, the Supported Commander must ensure that all required actions from each CAP phase are completed whenever possible. To prepare for such eventualities within their area of responsibility (AOR), Supported Commanders should prepare and publish AOR-specific supplemental instructions to the standard TPFDD LOI before the onset of a crisis to support assigned military operations. This planning will ensure that a TPFDD can be developed as rapidly as possible. (DoD:CJCSM 3122.02A, 2000:A-1)

The formal CAP process is not at all serial, and becomes less serial and more complicated during real crises. In fact, there are so many variables in the CAP process, that there are few ways to avoid engaging in reactive management once a crisis has

evolved to the point that the CJCS, supported and Supporting Commanders, and military intervention or combat forces are required to respond. Therefore, collaborative tools, TPFDD planning shells accomplished well in advance of crisis, and an interactive Joint Force Capabilities Register, are essential tools and processes in the attainment of the 72-hour TPFDD standard. These tools and processes can aid in the CAP process by ensuring accurate, capabilities-based real force data which can be inserted into plan shells based on the most likely crisis deployment operations in a Supported Commander's theater of operations. The bottom line is that a plan that addresses the most likely scenario even at a seventy- or eighty-percent level is better than no plan at all.

One key to successfully implementing a JFCR that integrates with a plan shell architecture to accelerate CAP is the accurate assessment of available capabilities and areas of capability overlap. Accurate accounting of these capabilities is essential in order to make the best use of constrained resources and speed the deployment process by eliminating redundancies in crisis planning and deployments.

Figure 8-Range of Military Operations (DoD: JP 3-0,1995:I-2).

Common Planning Factors

Figure 8 references the range of military operations from Military Operations Other Than War (MOOTW) to Large Scale Combat Operations. A brief review of the past decade's deployments shows that while they are different in many ways, there are common capabilities required in many of them. For example, the capability to provide force protection may vary in the number of forces and the specific logistics support required for a specific deployment, but not necessarily in the need for the presence of the capability. Similarly, any crisis deployment in which a short-notice capability to deploy aircraft out of bare bases is required, will require some degree of Tactical Airlift Control Element (TALCE) support. The amount of TALCE support will vary based primarily on the size and scope of the operation, but the need for the capability will exist in each crisis deployment of this type. All joint crisis deployment operations require some level of communications capability and command and control structure. Operations requiring deployment into areas of sparse or contaminated water supplies require either sustainment via airlift or trucking of water stores or a water purification capability.

A Study of Force Capabilities Listed in Joint Publication 3-33. Joint Publication 3-33, Joint Force Capabilities, addresses the joint force capabilities outlined in Joint Publication 3-33 in the CD-ROM that accompanies the publication. As a part of this research, I exported all of the force capabilities from the CD-ROM to a Microsoft Excel document to determine if it was possible to assess capabilities overlap between the Services (see Appendices B and C). Qualitative analysis shows many areas of capability overlap between the Services, but the data on force capabilities presented in JP 3-33 is not detailed enough to truly assess the depth of overlap.

While it initially seems that there are many areas of capability overlap between the services, it may not be as great as it seems upon further investigation. As an example, all of the services possess communications packages of varying sizes. While it appears that four Service branches all have a communications capability, in fact, each might have a small, medium, and large communications package. It is also important to mention the fact that some may be Service specific while others may support the Joint Staff (Kafer, 2001). These packages each represent a potentially different capability, making the total number of capabilities at least twelve. The existence of Service-unique communication packages makes the planning equation even more complicated. These issues make an even more convincing case for a JFCR planning tool that can serve to screen through all of the possible capabilities that might be matched against a requirement, and match the correct capability to a Supported Commander's intended COA.

Integration of Advance Planning and the JFCR to Accelerate the CAP Process

Advance planning shells based on required initial capabilities for specific operational types should provide an input architecture within the JFCR. The JP 3-33 CD-ROM demonstrating force capability selection based upon operational level tasks is a good demonstration of computer use to define required force capabilities, but it doesn't go nearly far enough. The focus on operational level tasks is neither specific nor integrated enough to use it for anything but a general educational overview of the capabilities that each of the services brings to the fight relative to the operational tasks. These tasks are 1) Conducting Operational Movement and Maneuver, 2) Providing Operational Intelligence, Surveillance, and Reconnaissance, 3) Employing Operational

Firepower, 4) Provide Operational Support, 5) Exercise Operational Command and Control, and 6) Provide Operational Protection (DoD: JP 3-33, 1999:V-1).

In order to speed the CAP processes the advance planning shell must be integrated into the JFCR as a menu-selectable part of the JFCR architecture. This is one of the best ways to capitalize upon the synergies of aggregating the capabilities of all of the Services against the capabilities required by a given type and size of deployment operation.

Chapter V addressed the rationale for and concept of operations of the Joint Force Capabilities Register. It then highlighted a few of the main challenges faced in the development and implementation of the JFCR, to include the differences between the Services' approaches to packaging forces, sourcing issues, security issues, and the workload associated with building and managing the JFCR. Assumptions and advantages of planning in advance of crisis, including a brief analysis of common capabilities were also investigated. Chapter VI will present a survey of some of the theater based crisis planning and deployment acceleration initiatives that are being used or researched presently by USSOCOM, USCENTCOM, and USPACOM. The existence of these initiatives evidences a need to improve the current joint deployment processes and tools.

VI. Accelerating the CAP Process: A Brief Survey of Theater Based Alternatives

There are many ongoing theater based initiatives mean to accelerate the CAP and crisis deployment processes. These initiatives have arisen as those responsible for planning and deployment have attempted to creatively make these processes better at the theater level. These initiatives range in scope from collaborative planning tools to force structuring initiatives. All of these initiatives illuminate a need to use the right tools for the different tasks that must be performed under the realities of rapid military crisis response. This survey is not intended to be all-inclusive, but to highlight a few of the initiatives currently being used or considered for use in the theaters.

USSOCOM: Enabling Rapid Special Forces Deployment

United States Special Operations Command's (USSOCOM) mission is to prepare special operations forces (SOF) to successfully conduct worldwide special operations, civil affairs, and psychological operations in peace and war in support of the regional combatant commanders, American ambassadors and their country teams, and other government agencies" (USSOCOM Fact Sheet, 1998:1). USSOCOM is a diverse special operations organization responsible for a wide variety of missions within Joint Special Operations Command (JSOC), United States Army Special Operations Command (USASOC), Air Force Special Operations Command (AFSOC), and Naval Special Warfare Command (NAVSOC). Additionally, each theater command has a separate special operations command that serves to address theater specific SOF issues.

At any time, many SOF forces are deployed around the world, providing training, advice, and nation-building assistance to allies in addition to responding to conventional crises (USSOCOM Fact Sheet, 1998:3). When SOF forces stationed outside the theater are needed to project force in response to crisis, they must be deployed rapidly from CONUS locations, necessitating rapid identification and sourcing of forces, much like conventional forces.

USSOCOM has taken the initiative to develop a collaborative, capabilities-based database that enables the rapid force identification and sourcing of CONUS-based forces during CAP. In 1996, a database was established to enable USSOCOM planners to manipulate Army SOF data more easily and efficiently. The database, which required 18 months to build has evolved to become Plan Identification Number (PID) 794DM, known at USSOCOM as the "SOF Force Options Database" (Consentino, 2001). A PID is a five-digit number in JOPES that specifies a particular plan.

The SOF Force Options Database is a JFCR style tool that allows the theater Supported Commander's CAP planners to extract accurate force modules or ULNs from 794DM, and input them into the planning PID from which they can rapidly tailor forces for deployment. Each component owns its own planning PID, which is updated at the unit level via tailoring during sourcing to deploy for a particular operation. In fact, the database is visible to all parties within the planning process from the units to the Supported Commander. The database employs force modules describing capabilities based on actual unit specifications to level IV detail. Its primary function is to provide special operations planners an accurate starting point for the identification and sourcing of forces (Consentino, 2001).

The key to the accuracy of the database is that the units themselves must be disciplined about updating the TUCHA data semiannually. The USSOCOM JOPES branch also must be disciplined about updating 794DM with the accurate TUCHA data, as the units do not update it directly. 794DM is a separate database from the TUCHA database, and is essentially a cleaned and scrubbed replacement for inaccurate TUCHA data (Consentino, 2001).

USCENTCOM: Sourced TPFDD

U.S. Central Command (USCENTCOM) is the unified command responsible for U.S. security interests in 25 nations that stretch from the Horn of Africa through the Arabian Gulf region, into Central Asia. United States Central Command is a headquarters element, which means that it contains no warfighting personnel. United States Army Forces Central Command (USARCENT), United States Naval Forces Central Command (USNAVCENT), United States Air Forces Central Command (USCENTAF), United States Marine Forces Central Command (USMARCENT), and Special Operations Command Central (SOCCENT) are the component commands, and joint special operations component, that make up USCENTCOM's primary warfighting and engagement organizations (USCENTCOM web pages, 2001). USCENTCOM theater goals are grouped into three key areas: warfighting, engagement and development. In order to support these goals, forces are provided by the parent services and SOCOM for all four component commands and SOCCENT as directed by the SECDEF since CENTCOM has no assigned forces.

USCENTCOM and USSOUTHCOM are unique among the joint commands in that they do not own any forces (Scott and Butterfield, 2001). However, the CENTCOM AOR covers many potential hot spots that might require rapid crisis response. The potential rapidity of the required response combined with the lack of owned forces has placed them in a position that forces maximum efficiency in their up-front crisis deployment processes.

USCENTCOM's response to this highly critical deployment situation is to develop a time phased force deployment database (TPFDD) that includes sourced force requirements. This sourced TPFDD is based on a Deployment Preparation Order, sometimes referred to as a Prepare to Deploy Order (PTDO) from the Joint Staff that is updated annually. This PTDO outlines capabilities required and the response time required to react to short term crisis contingencies, places real units on a response string, and provides for a robust menu of capabilities that are already sourced and listed within the TPFDD in advance of contingencies. The TPFDD then prioritizes these specific required capabilities in terms of available TRANSCOM lift and the overall concept of operations, which is based on the CINC's most critical expected contingencies (Scott, 2001).

USCENTCOM must be prepared to respond to a wide variety of crises in an AOR that can often be quite volatile. In order to be prepared for such a wide variety of operations, the forces depicted in the PTDO and sourced TPFDD are designed to be broad and robust enough to respond to a wide variety of threats. They are intended to provide an 80% solution for contingency responses within the USCENTCOM AOR (Scott, 2001).

This 80% solution reduces the time spent during CAP, specifically in the areas of transportation validation and sourcing of units. The data within CENTCOM's sourced TPFDD is beyond TUCHA data, as actual units are sourced against required capabilities. UICs and UTCs are plugged in to the TPFDD with their intended ports of embarkation and debarkation. Units still have to tailor forces if they are required to deploy, but tailoring is dramatically reduced relative to the traditional CAP processes that use TUCHA data that is not always representative of required capabilities. Every block of the TPFDD for the first seven days of movement, except early deployers and air bridge establishment, is filled in with level IV detail data. Level II data is used for the remaining portion of the initial TPFDD, as it can be changed to level IV after the initial contingency deployment push (Scott, 2001).

Essentially, the traditional Phases III through V are the areas where time can be reduced by planning in advance of the most critical contingencies and basing the plan on pre-existing initial lift constraints. The final product is a TPFDD that is sourced and ready for validation at a moment's notice, and that already meets USTRANSCOM lift constraints, enabling rapid force projection in the USCENTCOM AOR.

USPACOM: ACOA and Joint Mission Force Concepts

The mission statement for United States Pacific Command reads, "Ready today and preparing for tomorrow, the U.S. Pacific Command enhances security and promotes peaceful development in the Asia-Pacific region by deterring aggression, responding to crises and fighting to win" (USPACOM web page, 2001). To meet those objectives, some of PACOM's primary goals include: 1) Enhance security in the Asia-Pacific region,

2) Sustain training and readiness to fight and win multilaterally if possible, unilaterally if necessary, and 3) Be prepared to respond to crises short of war (USPACOM web page, 2001).

Advanced Course of Action Concept. The Advanced Course of Action (ACOA) is a USPACOM advanced concept technology demonstration system that contains advanced technology enabling geographically dispersed planning and execution forces to rapidly generate, assess and adapt courses of action for military operations. The ACOA contains five characteristics: a concurrent, distributed, collaborative tool suite; tightly integrated applications and accurate databases geared towards support of crisis action; a common operational picture; a single C2I system; and it works in coalition operations (USJFCOM:JDPO Glossary, 2000:1). The proposed ACOA high-level architecture is depicted in figure 9.

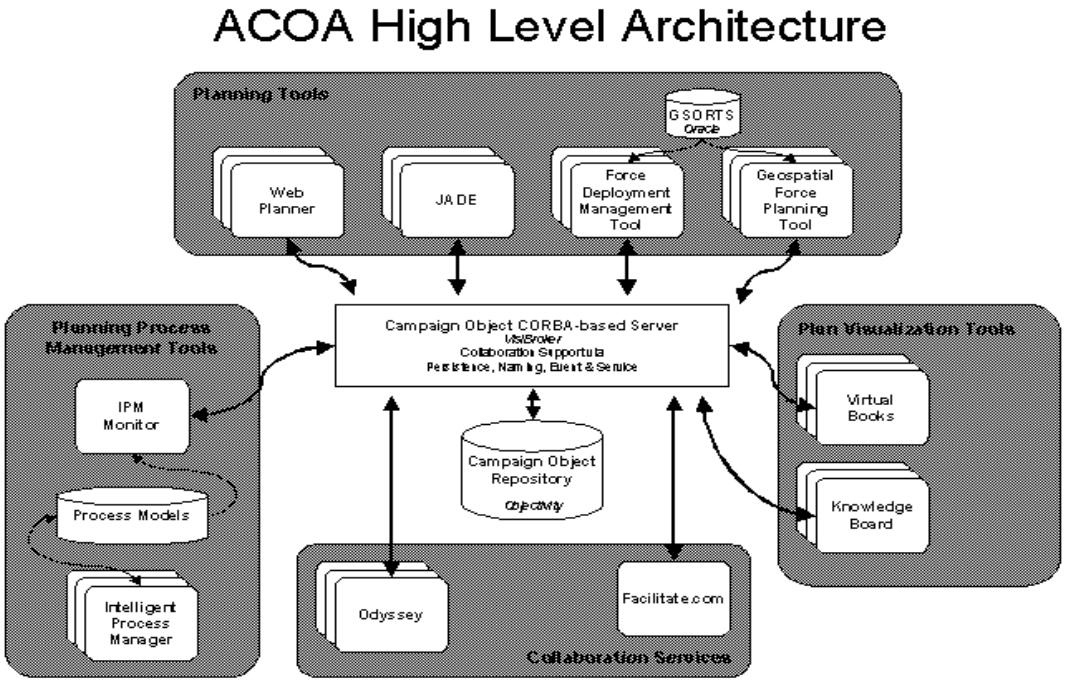

Figure 9-ACOA Architecture (USJFCOM/JDPO:ACOA IATO Part I (DRAFT), 2001:9).

"ACOA is designed to cut initial crisis response time by fifty percent and is based on the rapid application of emerging information technologies" (Kapos, 2000:3). It aims to do this by enhancing the operations picture via automated management and tracking of multiple COAs to prevent planners from getting ahead of decision makers (Kapos, 2000:4). ACOA also incorporates aspects of force capability packages using a program called Joint Assistant for Deployment and Execution during COA development to search for force capability packages appropriate for a given task (Kapos:II-14). However, it uses TPFDDs from previous operations and exercises as its database and lacks the force module standardization and data accuracy required to accurately time-phase force requirements and evaluate transportation feasibility (Clarke, Cochran, and Kafer, 2001: 13).

Joint Mission Force (JMF). While the ACOA is a technology-based solution to improved CAP, the JMF is a force-based solution. "The JMF is a force of approximately 20,000 personnel designated by USPACOM Components as Conventional Ready Forces from which a Joint Task Force Commander (CJTF) can build tailored task forces for the accomplishment of a wide range of missions" (USPACOM J-30E, 2001:1). It is designed to support a wide variety of operational missions short of war including personnel recovery, humanitarian assistance, disaster relief, noncombatant evacuation, peace keeping and enforcement, strike operations, and other MOOTW.

The overarching goal of the JMF is to improve Joint Task Force planning and operations through common infrastructure and standard procedures. The secondary objectives are to reduce crisis response time, increase planning effectiveness, strengthen

C3, and develop common operation procedures, while improving interoperability and multilateral cooperation (USPACOM, 2001).

The JMF concept uses three approaches to enhance operational effectiveness: First, operational control of service component and coalition forces gives the JTF commander a robust team from which he can tailor force packages for specific missions; Second, augmentation of the JTF Headquarters by a combined Deployable JTF Augmentation Cell and focused liaison teams gives the commander a significantly enhanced capability to plan, coordinate, and support operations. Finally, the establishment of a C4I network that ties all of these elements together enables a shared common operational picture, interactive collaborative planning, and an integrated logistics support scheme (USPACOM, 2001).

Chapter VI presented a survey of some of the theater based crisis planning and deployment acceleration initiatives currently are being used or researched by planners at USSOCOM, USCENTCOM, and USPACOM. These initiatives evidence a need to improve the current joint deployment processes and tools, and present some viable alternatives to consider in the development and implementation of USJFCOM's JFCR. Chapter VII will offer conclusions and recommendations for the ownership, integration, and use of the JFCR. Short-term solutions include using the planning tools and doctrine that currently exists in a more disciplined manner. Long-term solutions recommended include the establishment of theater crisis response time standards, a theater crisis response force, and a JFCR architecture built upon crisis advance planning shells integrated with actual unit data versus TUCHA data.

VII. Conclusions and Recommendations

There are many issues left to be resolved in the joint planning processes and responsive tools to support those processes. This chapter will discuss the short-term solutions which must be accomplished and follow with recommendations to enable faster, more accurate CAP in order to enable global engagement more effectively.

Short Term Solutions/Prerequisites for Change

The first issue that must be resolved is that the planning processes and tools that are now used in CAP must be updated to accurately reflect unit data, and made faster through better collaboration and more rapid decision making. Specifically, TUCHA data must be updated by the Services, UTCs in all the Services should be standardized, and computer based planning tools must be made to interface in a common format. In order to capitalize on any technological advantages in a joint context, the U.S. military must move quickly to adopt a common data standard that will allow interoperability between the Services. If deployment and employment in a combined context are to become a reality in the future, a common data standard must be extended to our allies as well.

If TUCHA data is to continue to be used, it must be updated to accurately reflect forces needed to support the capabilities required by a Supported Commander. Accuracy is essential in order to avoid duplication of effort in the CAP process between Phase III and Phase V, as inaccurate TUCHA data propagates forward into potentially inaccurate COAs and transportation validation. Updating TUCHA to reflect actual U.S. force capabilities would enable quicker identification of required capabilities, accurate time-

phasing of the capabilities into theater, and accurate transportation feasibility analysis during COA development, which ultimately improves the commander's estimates to be sent forward to the NCA.

Secondly, in order for U.S. military forces to operate in a truly joint context, the joint planning tools and processes should reflect common capabilities with common (or at least similar) UTCs. Doing so would allow CAP Phase III through Phase V to be accomplished more quickly, and at the same time avoid force duplication. UTCs should be scaled approximately the same across the Services. To be more specific, UTCs should be standardized and sized to reflect the smallest capability that might be tailored into a deployment package or selected independently to deploy. However, in order to ensure that the operational experts are given the appropriate authority to tailor their forces at the appropriate level, the Services should delegate the authority for establishing capability-based UTCs to the unit level. These things are also prerequisites for the next level of JFCR integration and use.

Finally, the Services must take an integrated approach to the management and procurement of planning systems that are interactive, collaborative, and easy to use. The integration of these planning tools should begin with the objective planning tools and work backward towards the tactical or operational level planning tools used by the units in the field. The fact that the JPEC has so many different tools that do "most of the job" but are not fully interoperable with the other Services' planning tools is clear evidence that the current planning technology management and procurement process is broken. In the short run, the best answer to problems with the current CAP process is to fix the

problems with the existing system, however, in the long run an integrated, joint solution is the best answer.

Future JFCR Integration and Use

The conceptual JFCR illustration in Figure 10 illustrates the interfaces, information access, and control from the unit level to the Supported Commander's planning staff. The model shows the unit level input of actual unit capability, readiness, and current status fed into individual Service interfaces, then into a JFCR. It is founded on a core of capabilities common to all Services, and wrapped by the remaining Service-unique capabilities. A Supported Commander's planning staff would then be able to assess a crisis situation, select a pertinent plan shell within the JFCR/JOPES architecture, and fill it with actual unit data during Phase III-COA Development. A JFCR built in this way offers several advantages to all parties involved in the deployment processes.

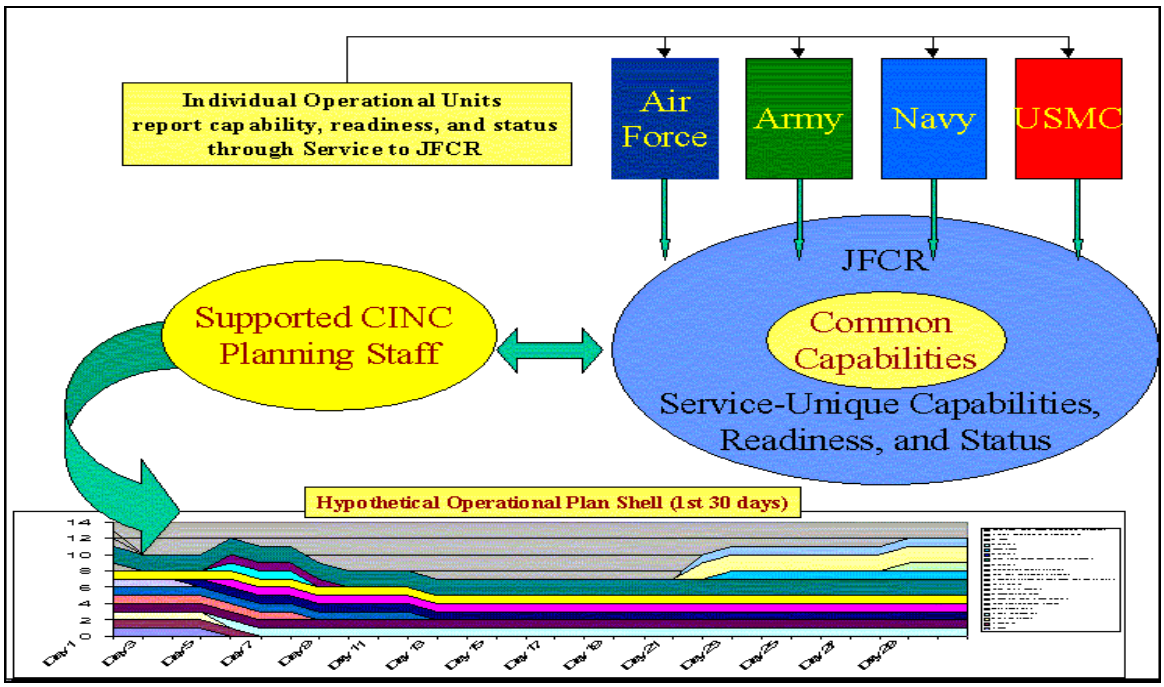

Figure 10-Possible Future JFCR Architecture Concept

First, the CAP process could be accelerated by allowing a Supported Commander to present the NCA with a COA (or COA's) that is (are) realistic in the actual capabilities that are presented in the COA. Second, transportation validation could be accomplished earlier in the CAP process, allowing earlier and more effective apportionment of airlift, and allowing faster, more effective crisis response. Third, the amount of time spent during Phase V-Execution Planning on tailoring and validation of forces could be reduced, speeding the CAP process even more. Some of the collateral benefits of such a system also make it worth investigating further.

Regarding the security issues currently associated with the sourcing phase of CAP and the need to use JFRG II and TC-AIMS II to transfer and scrub classified data into unclassified data and back, the JFCR model above might overcome some of the security issues presented. If unit capabilities, readiness, and deployment status are updated on a regular basis in advance of crises, the input of unit data in the sourcing phase becomes a one way transfer of data not associated with time or location. This would classify it at a much lower level than it might be in the current Phase III-V of the CAP process. In order to facilitate the connection of the database of unit capabilities, however, an additional one-way firewall would have to exist to prevent hostile entry into the classified portion of the planning database.

A common and valid rationale for not changing the CAP process is that any significant change requires staff manning that doesn't exist. While it is true that the building of a JFCR and initial data input would be difficult, the long-term benefits to the users can be significant. A system of this type might serve to replace other reporting systems such as GSORTS, as unit capabilities, readiness, and deployment status could be

easily observable at the headquarters staff level of each of the Services. The consolidation of other required reporting functions might also serve to make the JFCR more operationally feasible. Another advantage is that the JFCR proposed above would be easy to operate in a computer windows format, enabling responsible individuals within an organization delegated by the unit commander to make system updates.

The conceptual framework that currently fits this model best is something called Shared Data Engineering (SHADE). The SHADE concept refers to the future aggregation of collaborative planning tools and databases to facilitate more rapid, collaborative planning. Within SHADE, anyone who has permission to access the collaborative JFCR tools would be able to match unit level IV detail to a specific requirement. The SHADE concept is excerpted below:

> In the future, company and squadron sized units will maintain their assigned unit equipment on SHADE, accessible via the web. All actions on that assigned equipment will be reflected in the data to include maintenance status, TDY status, and support equipment availability. The Supported Commander (and Components) will have full knowledge of the capabilities available, prior to the initiation of planning. In the SHADE environment, unit capabilities and status is updated on a set recurring basis. Capabilities may be derived at any time, not only for a specific crisis event. Capabilities will be predicated on a defined UTC requirement and will include level IV detail. The unit reporting will be based upon owned, possessed, and authorized equipment, and upon personnel lists. (USJFCOM:JDPO JFDEP Draft, 2000:13)

Establishment, Maintenance, and Ownership of the JFCR

The USUSJFCOM J4 JDPO should own the JFCR architecture and maintain responsibility for administrating the JFCR. The administrator of the JFCR should be the "honest broker" and ensure there is balance in the JFCR. The Services should be responsible for validating unit accuracy and readiness data as these duties correlate

directly with their charter to organize train and equip their forces. Individual units should be responsible for updating the JFCR with their current deployment status, readiness status, and current capabilities relative to the unit's intended capabilities.

In the long run, the entire JPEC, the Services, and the units that must deploy in response to crisis must jointly own the JFCR in order for it to be effective and useful in accelerating CAP. To arrive at such a state of joint ownership, a consensus on JFCR issues should be considered the ideal, but the reality is that no CAP acceleration tool will be perfect for all parties in the planning process. Therefore, the JDPO should make every effort to consolidate inputs for improvement to the JFCR, but as the joint agent for deployment process improvement, must be allowed to do what is best for the deployment process without attempting to satisfy everyone. One danger in attempting to satisfy everyone is that the tools derived of consensus may be so watered down that they do the opposite of what they were intended. Another danger is that the quest for consensus will delay the improvement process so much that the tools that are needed in the near time horizon are delayed even more when they need to be operational now.

Establishment of Theater Crisis Response Time Standards

The 72-hour TPFDD is a good start in the acceleration of the CAP process. The next level is the formal establishment of theater crisis response time standards in order to establish specific time criteria to have operational forces in place and ready to execute crisis operations. These timelines will vary in different theaters even in the case of the same type of operation. Noncombatant evacuation operations in one AOR will invariable take a different amount of time to have forces in place than in a different AOR. Theater

specific crisis response time standards need to be established for the most time critical of crises that require deployment of forces in less time than the 72-hour TPFDD will enable. Finally, it is worth noting that the establishment of such time standards might not be as difficult for USPACOM and USEUCOM, as they own their own forces, but USCENTCOM and USSOUTHCOM must request forces from the force providers.

Theater Crisis Response Force

Another possible enabler of rapid crisis response might be the creation of a force that exists only to support initial crisis deployments of varying size and intensity. Much like the establishment of theater crisis response time standards above, the need for a theater crisis response force is predicated on the most time critical of crises that require deployment of forces in less time than the 72-hour TPFDD will allow. This force would be comprised of many different rapidly deployable force capabilities to support theater specific operations. Organizing, training, and equipping a theater crisis response force would involve thorough study of the most likely crisis operations in a given theater. The intent of such a study should be to merge these findings and prioritize early movers based on common required force capabilities across the operational spectrum. By doing so, it may be possible to establish a "stackable" force package that might be used as an initial crisis response force. The next step would be to design a force comprised of the specific capabilities required in addressing the most likely threats and crisis situations encountered in the early phases of the crisis.

In order to be effective against various sizes of operations and possible crisis escalations, forces would have to be modular and "stackable" to enable rapid force

projection. In this case, "stackable" refers to the modularity of an initial response force capability. This can be achieved by isolating capabilities required in the early deployment phase of crises, then aggregating them at the lowest possible level into crisis response teams. These combined capability modules would be stacked based on the size and scope of the crisis. If this were possible, it would reduce the time spent tailoring a response force and planning the initial crisis movement. This in turn would result in a more rapid response to crisis.

Finally, transportation requirements for such a force would be assessed for feasibility and validated well in advance of their use in order to ensure operational effectiveness during actual crisis.

Further Study of Common Capabilities across the SSC Spectrum

Experimentation. In order to prove the value of an integrated JFCR tool, it would be best to accomplish a quasi experiment using a two-level experiment. Level I would involve the building and validation of a CINC's course of action and full TPFDD based on a contrived scenario. It would mimic a possible future operation, incorporating lessons learned from past deployment operations and the integration of current force capabilities. The scenario should be detailed enough to allow a CINC to fully exercise the crisis planning process. Specifically, such an experiment would stand up a crisis-planning cell with a geographic CINC to exercise an actual TPFDD build (to level 4 detail). Once a full course of action and TPFDD is validated, level II of the experiment would begin.

Level II of the experiment would involve introducing the previously mentioned scenario and a pre-built TPFDD planning shell to another planning cell and geographic CINC. The TPFDD planning shell would be presented as a starting point from which a capabilities database simulating actual unit data would be added in order to allow the Supported Commander's planners to fill the TPFDD shell with the appropriate capabilities for the scenario. My theory is that the second time this scenario is operationalized, the TPFDD build time would be significantly lower than the control group version, possibly approaching or beating the 72-hour goal. Ideally, the use of a hypothetical contingency approximating the middle of the size and hostility spectrums on roughly equivalent planning staffs should show a time difference in the planning process.

Threats to Validity. The small size and lack of repetition of this proposed experiment render it primarily a trigger for further experimentation. These factors also lend to relatively high threats to external validity. Intuitively, this experiment should present a significant difference in time spent during the crisis planning process. However, ideally, such an experiment would be run several times to ensure its validity, rule out biases, and increase the experiments ability to generalize outside of the population chosen for study. Threats to internal validity will include selection and selection by time interaction due to the inability to build two crisis action teams of members of exactly the same rank and experience. Time threats would be reduced by the use of a control group.

Conclusion

The lessons learned from a decade of deployments must merge with improved, integrated capabilities-based planning tools to efficiently execute global mobility operations to support rapid power projection in a more seamless manner. Failure to do so negates the synergies and economies a thorough and formal understanding of past operations can offer the JPEC in the crisis planning process.

Exploiting advanced technologies and merging them with current doctrine on force employment and catalogued force capabilities has the potential to enable rapid global mobility and power projection in a more seamless manner, enabling rapid crisis reaction on a global scale. Specifically, use of plan shells based on most likely scenarios integrated with a capabilities driven JFCR in a collaborative planning environment should enable more rapid TPFDD development and validation, more rapid force projection, and more efficient use of limited lift assets. The use of advance planning in this manner can expedite CAP by providing a Supported Commander with a solid baseline from which to build an effects-based force. This baseline can be met by using real unit data rather than starting with a blank planning slate and notional force data.

Appendix A: Joint Deployment Process Owner Glossary of Terms and Systems (JDPO, 2000)

Advanced Course of Action Concept. The Advanced Course of Action (ACOA) is a USPACOM prototype system that contains advanced technology enabling geographically dispersed planning and execution forces to rapidly generate, assess and adapt courses of action for military operations. The prototype contains five characteristics: a concurrent, distributed, collaborative tool suite; tightly integrated applications and accurate databases geared towards support of crisis action; a common operational picture; a single C2I system; and it works in coalition operations.

Aerial Port of Debarkation. A station that serves as an authorized port to process and clear aircraft and traffic for entrance to the country where located. Also called APOD.

Aerial Port of Embarkation. A station that serves as an authorized port to process and clear aircraft and traffic for departure from the country where located. Also called APOE.

Alert Order. A crisis-action planning directive from the Secretary of Defense, issued by the Chairman of the Joint Chiefs of Staff, that provides essential guidance for planning and directs the initiation of execution planning for the selected course of action authorized by the Secretary of Defense. 2. A planning directive that provides essential planning guidance and directs the initiation of execution planning after the directing authority approves a military course of action. An alert order does not authorize execution of the approved course of action. See also course of action; crisis action planning; execution planning.

Campaign plan. A plan for a series of related military operations aimed at accomplishing a strategic or operational objective within a given time and space.

Chairman Joint Chiefs of Staff (CJCS)/Joint Staff (JS). The CJCS is the senior military advisor to the NCA and serves as the primary interface between the NCA and the military. The CJCS is authorized a personal staff called the Joint Staff.

Commander's Concept. See concept of operations.

Concept of Operations. DOD) A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called CONOPS

Container Consolidation Points. The Consolidation and Containerization Point (CCP) builds efficiency in the moving process by use of seavan containers, and 463L airlift pallets to consolidate shipments to single and multiple destination consignees. Once Less-Than-Release Unit (LRU) cargo/shipments (subject to exceptions in DOD 4500.32R) arrive at the CCP, they are consolidated based on the following order of preference: a full container for a single consignee; a container load for delivery by stopoff service to multiple consignees in the same geographic area; a container load for delivery to multiple consignees through a breakbulk point; and CCP loads based on consignor integrity and uses a split shipment indicator when necessary. Shipment data may be moved by Electronic Data Interface (EDI) from the CCP to the Aerial Port of Embarkation /Water Port of Embarkation (APOE/WPOE). EDI may also be used for data transfers from the origin shipper to the CCP.

Contingency Plans. A plan for major contingencies that can reasonably be anticipated in the principal geographic subareas of the command. Also called CONPLANS.

Course of Action. 1. A plan that would accomplish, or is related to, the accomplishment of a mission. 2. The scheme adopted to accomplish a task or mission. It is a product of the Joint Operation Planning and Execution System concept development phase. The Supported Commander will include a recommended course of action in the commander's estimate. The recommended course of action will include the concept of operations, evaluation of supportability estimates of supporting organizations, and an integrated time-phased data base of combat, combat support, and combat service support forces and sustainment. Refinement of this database will be contingent on the time available for course of action development. When approved, the course of action becomes the basis for the development of an operation plan or operation order. Also called COA.

Deploying Forces. A deploying force/unit is any Department of Defense (DoD) element (includes individual deployees) directed to move to a new location to accomplish a specific task or mission regardless of whether the move is within the continental United States (CONUS) or outside the continental United States (OCONUS). Deployment of a unit may be construed to include administrative/non-tactical movements. As such, the JDP must embrace sustainment, administrative and other moves in peace or war, for training or mission response. In the future, other U.S. federal government agencies, outside of DoD, may use the deployment process to respond to national interest and/or emergencies. For example, the Federal Emergency Management Agency (FEMA) may use the deployment process in response to a natural disaster.

Deployment Order. A planning directive from the Secretary of Defense, issued by the Chairman of the Joint Chiefs of Staff, that authorizes and directs the transfer of forces between combatant commands by reassignment or attachment. A deployment order normally specifies the authority that the gaining combatant commander will exercise over the transferred forces.

Deployment Preparation Order. An order issued by competent authority to move forces or prepare forces for movement (e.g., increase deployability posture of units).

Direct Vendor Delivery. Direct Vendor Delivery (DVD) contracts are a method of contracting which features direct delivery from a designated vendor to a customer. The purpose of DVD is to reduce logistics response time and infrastructure costs. Direct shipment avoids time lost in the Government supply system. DVD contracts are usually long term contracts awarded to vendors for items or groups of items with a known constant demand.

Early Deployers. Early deployers are units or forces whose mission is to support the deployment process. These units or forces must deploy, prior to the main phase of the deployment, to establish the required deployment support packages at the onload, en-route and offload destinations. Early deployers are identified as Air Force Tanker/Airlift Control Elements; Army Port Opening Teams and Terminal Transfer Units; Marine Force Movement Control Center and Airlift, Sealift, and Rail Liaison Elements; and Navy Cargo Handling and Port Groups and Naval Beach Groups.

Essential Elements of Information. The critical items of information regarding the enemy and the environment needed by the commander by a particular time to relate with other available information and intelligence in order to assist in reaching a logical decision. Also called EEI.

Execute Order. 1. An order issued by the Chairman of the Joint Chiefs of Staff, by the authority and at the direction of the Secretary of Defense, to implement a National Command Authorities decision to initiate military operations. 2. An order to initiate military operations as directed.

Force Provider(s). The force provider is any organization that has the ability to provide forces and/or capabilities in support of a military operation. CINCs, theater Service components, Services, Defense and other U.S. governmental agencies, non-governmental organizations (NGOs), private volunteer organizations (PVOs), international organizations (IO), and multinational organizations may fit in this category. Supporting Commanders and Component Commanders (examples include USUSJFCOM, United States Forces Command (USFORSCOM), Air Combat Command (ACC)) are Force Providers for the purpose of this definition.

"Information Technology Management Reform Act of 1996".

In-Transit Visibility. The ability to track the identity, status, and location of DOD unit and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; medical patients; and personal property from origin to consignee or destination established by the CINCs, Military Services, or DOD Agencies during peace, contingencies, and war. Also called ITV.

Joint Force Commander. A general term applied to a combatant commander, sub-unified commander, or joint task force commander authorized to exercise combatant command (command authority) or operational control over a joint force.

Joint Operation Planning and Execution System. A continuously evolving system that is being developed through the integration and enhancement of earlier planning and execution systems: Joint Operation Planning System and Joint Deployment System. It provides the foundation for conventional command and control by national- and theater-level commanders and their staffs. It is designed to satisfy their information needs in the conduct of joint planning and operations. Joint Operation Planning and Execution System (JOPES) includes joint operation planning policies, procedures, and reporting structures supported by communications and automated data processing systems. JOPES is used to monitor, plan, and execute mobilization, deployment, employment, and sustainment activities associated with joint operations. Also called JOPES.

Joint Planning and Execution Community. Those headquarters, commands, and agencies involved in the training, preparation, movement, reception, employment, support, and sustainment of military forces assigned or committed to a theater of operations or objective area. It usually consists of the Joint Staff, Services, Service major commands (including the Service wholesale logistics commands), unified commands (and their certain Service component commands), sub-unified commands, transportation component commands, joint task forces (as applicable), Defense Logistics Agency, and other Defense agencies (e.g., Defense Intelligence Agency) as may be appropriate to a given scenario. Also called JPEC.

Joint Reception, Staging, Onward Movement & Integration (JRSOI). JRSOI is the last deployment phase and completes the end-to-end deployment process. JRSOI forms the critical link between strategic deployment and operational and/or tactical employment of joint and multinational forces in the operational area. JRSOI is reassembling unit personnel and equipment deploying to an operational area into mission-capable forces. The overall objective of JRSOI is to build mission-capable forces as quickly as possible and is the responsibility of the Supported Commander receiving the augmenting forces. The goal of JRSOI is to synchronized the seamless flow of separately deployed personnel and material from offload at PODs to employment destinations as reassembled, mission capable-forces

Joint Total Asset Visibility (JTAV). JTAV is the capability to provide users of timely and accurate information on the location; movement; status; and identity of units, personnel, equipment, and supplies.

Level of detail. Within the current joint planning and execution systems, movement characteristics are described in five levels of details. These levels are a. Level I. Aggregated level. Expressed as total number of passengers and total short tons, total

measurement tons, total square feet and/or total hundreds of barrels by unit line number (ULN), cargo increment number (CIN), and personnel increment number (PIN). b. Level II. Summary level. Expressed as total number of passengers by ULN and PIN and short tons, measurement tons (including barrels), total square feet of bulk, oversize, outsize, and non-air-transportable cargo by ULN and CIN. c. Level III. Detail by cargo category. Expressed as total number of passengers by ULN and PIN, short tons, and/or measurement tons (including barrels), total square feet of cargo as identified by the ULN or CIN three-position cargo category code. d. Level IV. Detail expressed as number of passengers and individual dimensional data (expressed in length, width, and height in number of inches) of cargo by equipment type by ULN. e. Level V. Detail by priority of shipment. Expressed as total number of passengers by Service specialty code in deployment sequence by ULN individual weight (in pounds) and dimensional data (expressed in length, width, and height in number of inches) of equipment in deployment sequence by ULN.

Lift Provider(s). Lift providers are functional elements that provide strategic operational and/or tactical transport. They include USTRANSCOM (military and civil assets); unit organic lift, supported and supporting commands, allied assets, HN, and third party contractors.

Limiting Factor. A factor or condition that, either temporarily or permanently, impedes mission accomplishment. Illustrative examples are transportation network deficiencies, lack of in-place facilities, mal-positioned forces or materiel, extreme climatic conditions, distance, transit or overflight rights, political conditions, etc.

M database.

Multinational Elements. Multinational elements are alliance, coalition, host nation (HN), and transnational, international, and non-United States (U.S.) organizations supporting U.S. operations. HNs are sovereign areas in which operations are to be conducted.

National Command Authority (NCA). The NCA consists of the President and the Secretary of Defense (SECDEF). The SECDEF articulates NCA decisions to the Chairman of the Joint Chiefs of Staff (CJCS).

Operation Plans. Any plan, except for the Single Integrated Operation Plan, for the conduct of military operations. Plans are prepared by combatant commanders in response to requirements established by the Chairman of the Joint Chiefs of Staff and by commanders of subordinate commands in response to requirements tasked by the establishing unified commander. Operation plans are prepared in either a complete format (OPLAN) or as a concept plan (CONPLAN). The CONPLAN can be published with or without a time-phased force and deployment data (TPFDD) file. a. OPLAN--An operation plan for the conduct of joint operations that can be used as a basis for

development of an operation order (OPORD). An OPLAN identifies the forces and supplies required to execute the CINC's Strategic Concept and a movement schedule of these resources to the theater of operations. The forces and supplies are identified in TPFDD files. OPLANs will include all phases of the tasked operation. The plan is prepared with the appropriate annexes, appendixes, and TPFDD files as described in the Joint Operation Planning and Execution System manuals containing planning policies, procedures, and formats. Also called OPLAN. b. CONPLAN--An operation plan in an abbreviated format that would require considerable expansion or alteration to convert it into an OPLAN or OPORD. A CONPLAN contains the CINC's Strategic Concept and those annexes and appendixes deemed necessary by the combatant commander to complete planning. Generally, detailed support requirements are not calculated and TPFDD files are not prepared. Also called CONPLAN. c. CONPLAN with TPFDD--A CONPLAN with TPFDD is the same as a CONPLAN except that it requires more detailed planning for phased deployment of forces. Also called OPLANS

Operations Reports (OPREPS)

Presidential Select Reserve Call-Up. Provision of a public law (US Code, title 10 (DOD), section 12304) that provides the President a means to activate, without a declaration of national emergency, not more than 200,000 members of the Selected Reserve for not more than 270 days to meet the support requirements of any operational mission. Members called under this provision may not be used for disaster relief or to suppress insurrection. This authority has particular utility when used in circumstances in which the escalatory national or international signals of partial or full mobilization would be undesirable. Forces available under this authority can provide a tailored, limited-scope, deterrent, or operational response, or may be used as a precursor to any subsequent mobilization. Also called PSRC.

Readiness Assessment System. (RAS)

Situation Reports. A report giving the situation in the area of a reporting unit or formation. Also called SITREPS.

Seaport of Debarkation. The geographical water port at which cargo and/or personnel are discharged. Also called SPOD.

Seaport of Embarkation . The geographical water port in a routing scheme from which cargo and/or personnel depart. Also called a SPOE.

Special Category SPECAT.

Status of Resources and Training System. GSORTS is the single, automated reporting system within the Department of Defense that provides the National Command Authorities (NCA) and the Chairman of the Joint Chiefs of Staff with authoritative

identification, location, assignment, personnel, and equipment data for the registered units and organizations of the US Armed Forces, Defense agencies, and certain foreign and international organizations involved in operations with US Armed Forces. The composite registry of all units is maintained by the Joint Staff. After initial registration, GSORTS is designed to receive reports by exception when changes occur in GSORTS.

Supported Commander. The Supported Commander is defined as the joint force commander/the combatant commander in charge of the mission necessitating the deployment. This could be the Supported Commander in Chief (CINC), Sub-Unified commander, a component commander, JTF commander, or Combined Joint Task Force Commander (CJTF). There are designated components under the Supported Commander. These include forces identified to a specific theater or mission, trained for the command or theater or mission. For example, the United States Central Command (USCENTCOM) has five Components: United States Air Forces Central Command (USCENTAF), United States Marine Forces Central Command (USMARCENT), Special Operations Command Central (SOCCENT), United States Army Forces Central Command (USARCENT), and United States Naval Forces Central Command (USNAVCENT).

Sustainment Provider(s). The sustainment provider is any organization that provides the materiel and/or services to combatant commanders to perform the mission. Sustainment implies (1) basic issue, (2) accompanying supplies, (3) prepositioned war reserves -- theater owned stocks, and (4) resupply. Sustainment is based on anticipated needs and requests made by the Supported Commander or through components/executive agents. Organizations and/or agencies that provide sustainment and/or are involved in the decision process may include Defense Logistics Agency (DLA), the Services, combatant commands, JTF, deployed units, depots, deployment support bases, direct vendor contractors, etc.

Time Phased Force and Deployment Data. The Joint Operation Planning and Execution System data base portion of an operation plan; it contains time-phased force data, non-unit-related cargo and personnel data, and movement data for the operation plan, including: a. In-place units. b. Units to be deployed to support the operation plan with a priority indicating the desired sequence for their arrival at the port of debarkation. c. Routing of forces to be deployed. d. Movement data associated with deploying forces. e. Estimates of non-unit-related cargo and personnel movements to be conducted concurrently with the deployment of forces. f. Estimate of transportation requirements that must be fulfilled by common-user lift resources as well as those requirements that can be fulfilled by assigned or attached transportation resources. Also called TPFDD.

TPFDD LOI. The Supported Commander publishes a letter of instruction (LOI) at the beginning of the plan development phase of deliberate planning. The purpose of the LOI is to give the CINC's components commanders and supporting commands and agencies specific guidance on how the plan is to be developed. The Supported Commander's staff

coordinates with the affected commands such as USTRANSCOM and its components before publication to ensure the guidance given in the LOI is current. The LOI must furnish specific guidance concerning these items: priority of air movement for major units; apportionment of airlift capability between Service components and resupply; standard time windows for resupply defined by the earliest arrival date (EAD) and latest arrival date (LAD); resupply and non-unit personnel replacement planning factors; retrograde, chemical, and nuclear TPFDD procedures; attrition planning factors; standard ports of embarkation (POEs), and ports of debarkation (PODs) for forces, and channels for resupply; administrative management of identifiers used within JOPES application software to identify, manipulate, and track force, cargo, and personnel requirements (e.g., unit line numbers (ULNs), cargo increment numbers (CINs), personnel increment numbers (Pins), and force record numbers (FRS); and the CINCs required delivery dates (RDDs) and TPFDD points of contact for the supported and supporting CINCs' staff.

Transportation Feasibility. Operation plans and operation plans in concept format are considered transportation feasible when the capability to move forces, equipment, and supplies exists from the point of origin to the final destination according to the plan. Transportation feasibility determination will require concurrent analysis and assessment of available strategic and theater lift assets, transportation infrastructure, and competing demands and restrictions. a. The Supported Commander of a combatant command (CINC) will analyze deployment, joint reception, staging, onward movement, and integration (JRSOI), and theater distribution of forces, equipment, and supplies to final destination. b. Supporting CINCs will provide an assessment on movement of forces from point of origin to aerial port of embarkation and/or seaport of embarkation. c. The Commander in Chief, United States Transportation Command will assess the strategic leg of the time-phased force and deployment data for transportation feasibility, indicating to the Chairman of the Joint Chiefs of Staff and Supported Commander that movements arrive at the port of debarkation consistent with the Supported Commander's assessment of JRSOI and theater distribution. d. Following analysis of all inputs, the Supported Commander is responsible for declaring a plan end-to-end executable. See also operation plan.

Unit Line Number. A seven-character, alphanumeric field that uniquely describes a unit entry (line) in a Joint Operation Planning and Execution time-phased for and deployment data. Also called a ULN.

Validate. Execution procedure used by combatant command components, supporting combatant commanders, and providing organizations to confirm to the Supported Commander and US Transportation Command that all the information records in a time-phased force and deployment data not only are error-free for automation purposes, but also accurately reflect the current status, attributes, and availability of units and requirements. Unit readiness, movement dates, passengers, and cargo details should be confirmed with the unit before validation occurs.

Verify. This definition applies to the action accomplished by forces and force providers prior to the Supported Commander completing the validation action of forces to the lift provider. The actions consist of reviewing the force capabilities requested against those being provided. The forces or force provider will verify that the force being provided meets the commander's intent for employment of forces (Supported Commander's mission requirement), that the level of detail in the automated systems are appropriate (level IV for JOPES or Level VI or higher for transportation), that the records in a time-phased force and deployment data not only are error-free (for automation purposes) but also accurately reflect current status. Unit readiness, movement dates, passengers, and cargo details have been confirmed with the unit and the Supported Commander has to confirm mission requirement is met prior to verification.

Warning Order. 1. A preliminary notice of an order or action which is to follow. (DOD) 2. A crisis action planning directive issued by the Chairman of the Joint Chiefs of Staff that initiates the development and evaluation of courses of action by a Supported Commander and requests that a commander's estimate be submitted. 3. A planning directive that describes the situation, allocates forces and resources, establishes command relationships, provides other initial planning guidance, and initiates subordinate unit mission planning.

Systems

Force Validation Tool (FVT). FVT supports OPLAN validation activities for scheduling and movement.

Global Combat Support System (GCSS). A capability that delivers a strategy to provide information interoperability across combat support functions and between combat support and command and control functions in support of the Joint Warfighter. GCSS provides a fused, multi-dimensional view of military operations and the ability to coordinate upwardly, laterally, and downwardly through all echelons. GCSS is not a new application or a replacement for Service or Agency systems. Also called GCSS.

Global Command and Control System. Highly mobile, deployable command and control system supporting forces for joint and multinational operations across the range of military operations, any time and anywhere in the world with compatible, interoperable, and integrated command, control, communications, computers, and intelligence systems. Also called GCCS. See also command and control; command and control system. Also called GCCS.

Global Status of Resources and Training System. An output application furnishing information on the status of units with respect to personnel, equipment, and training. The location of specific units can be plotted on digitized maps produced by the National

Imagery and Mapping Agency (NIMA). GSORTS uses data entered by the Services, CINCs, and combat support agencies. GSORTS query and display capabilities include the following: categories of units (ships, fighter aircraft, ground forces); specific types of units (frigates, marine infantry battalions, F-18 squadrons); by OPLAN; and by specific unit (detailed statue information). Also called GSORTS

JOPES Editing Tool (JET). JET provides the JPEC with a rapid, user-friendly, tool for updating and maintaining TPFDDs. JET is used to build the OPLAN TPFDD, make changes required throughout the planning and refinement process, and extract information for review.

Joint Flow and Analysis System for Transportation (JFAST). JFAST is a modeling tool that gives planners a way to analyze the transportation feasibility of a plan using virtually the same data and algorithms used by TSTRANSCOM and its components.

Joint Force Requirements Generator II. JFRG II is a Time Phased Force and Deployment Data (TPFDD) editing application designed to satisfy deployment planning and execution requirements at both home stations and remote command centers. Also known as JFRG II.

Logistics Sustainment Analysis and Feasibility Estimator (LOGSAFE). LOGSAFE provides the capability to compute resupply and sustainment requirements by class of supply and add them to the TPFDD as cargo increment numbers (CINs) for sourcing and analysis. LOGSAFE is run in order to accomplish a realistic transportation feasibility of the TPFDD.

Rapid Query Tool (RQT). RQT is designed to be a total OPLAN data analysis and reporting tool with emphasis on optimizing system performance. RQT takes advantage of the database server's capacity to manage multiple processes to extract data, thus, eliminating the time consuming bottleneck of multiple ORACLE table joins to obtain information

Scheduling and Movement (S & M). S&M provides the capability to create, update, allocate, manifest, and review both Transportation Component Command (TCC) and organic carrier information before and during deployment. Users can also review, analyze, and generate several predefined reports on an extensive variety of scheduling and movement information.

Transportation Coordinator's Automated Information for Movement System II. Transportation Coordinator's Automated Information for Movement System II (TC-AIMS II) provides unit and installation transportation officers with a single and effective Automated Information System (AIS) that performs transportation management for movement of units, passengers, and cargo for day-to-day operations within the Defense Transportation System (DTS) during any contingencies. TC-AIMS II is designated the

single, joint source data system for unit move information to JOPES, facilitating the objective 72-hour TPFDD validation. TC-AIMS II will fulfill the following objectives: enhance and improve the effectiveness and efficiency of the DTS; support planning for deploying and re-deploying combat, combat support, and combat service support forces in execution of U.S. defense missions; eliminate duplication in automated support for day-to-day movement operations of receiving, controlling, and shipping cargo and passengers; enhance coordination and management of force deployments, including in-transit visibility and total asset visibility (ITV/TAV); provide for reception, staging, onward movement, and integration of deploying forces into the destination theater; and be service-configurable to meet the needs of the different organizational levels and business processes.

Appendix B. Joint Force Capabilities (JP 3-33, CD-ROM)

General Capability Category	Capability Task	Medium	Capability Owner	Tools
Air Operations (fixed wing)	AERIAL IMAGERY		NIMA	
Air Operations (fixed wing)	AERIAL IMAGERY		NIMA	
Air Operations (fixed wing)	AERIAL IMAGERY		NOAA	
Air Operations (fixed wing)	AERIAL IMAGERY		NOAA	
Air Operations (fixed wing)	AERIAL IMAGERY		US AIR FORCE	
Air Operations (fixed wing)	AERIAL IMAGERY		US ARMY	
Air Operations (fixed wing)	AERIAL IMAGERY		US COAST GUARD	
Air Operations (fixed wing)	AERIAL IMAGERY		US CUSTOMS SERVICE	
Air Operations (fixed wing)	AERIAL IMAGERY		US MARINE CORPS	
Air Operations (fixed wing)	AERIAL IMAGERY		US NAVY	
Air Operations (fixed wing)	AERIAL IMAGERY		USSPACECOM	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		NIMA	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		NIMA	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		NOAA	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		NOAA	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US AIR FORCE	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US ARMY	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US COAST GUARD	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US CUSTOMS SERVICE	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US MARINE CORPS	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		US NAVY	
Air Operations (fixed wing)	AERIAL RECONNAISSANCE		USSPACECOM	
Air Operations (fixed wing)	AERIAL REFUELING		US AIR FORCE	
Air Operations (fixed wing)	AERIAL REFUELING		US MARINE CORPS	
Air Operations (fixed wing)	AERIAL REFUELING		US NAVY	
Air Operations (fixed wing)	AERIAL REFUELING		USSOCOM	
Air Operations (fixed wing)	AERIAL REFUELING		USTRANSCOM	
Air Operations (fixed wing)	AIR INTERDICTION		US AIR FORCE	
Air Operations (fixed wing)	AIR INTERDICTION		US ARMY	
Air Operations (fixed wing)	AIR INTERDICTION		US MARINE CORPS	
Air Operations (fixed wing)	AIR INTERDICTION		US NAVY	
Air Operations (fixed wing)	AIR INTERDICTION		USSTRATCOM	
Air Operations (fixed wing)	CLOSE AIR SUPPORT		US AIR FORCE	
Air Operations (fixed wing)	CLOSE AIR SUPPORT		US ARMY	
Air Operations (fixed wing)	CLOSE AIR SUPPORT		US MARINE CORPS	
Air Operations (fixed wing)	CLOSE AIR SUPPORT		US NAVY	
Air Operations (fixed wing)	CLOSE AIR SUPPORT		USSOCOM	
Air Operations (fixed wing)	COMBAT AIR PATROL		US AIR FORCE	
Air Operations (fixed wing)	COMBAT AIR PATROL		US MARINE CORPS	
Air Operations (fixed wing)	COMBAT AIR PATROL		US NAVY	
Air Operations (fixed wing)	COUNTERAIR	AIR	US AIR FORCE	
Air Operations (fixed wing)	COUNTERAIR	LAND	US ARMY	
Air Operations (fixed wing)	COUNTERAIR	SEA	US COAST GUARD	
Air Operations (fixed wing)	COUNTERAIR	AIR	US MARINE CORPS	
Air Operations (fixed wing)	COUNTERAIR	LAND	US MARINE CORPS	
Air Operations (fixed wing)	COUNTERAIR	AIR	US NAVY	
Air Operations (fixed wing)	COUNTERAIR	SEA	US NAVY	
Air Operations (fixed wing)	DEEP AIR SUPPORT		US AIR FORCE	
Air Operations (fixed wing)	DEEP AIR SUPPORT		US MARINE CORPS	
Air Operations (fixed wing)	DEEP AIR SUPPORT		US NAVY	
Air Operations (fixed wing)	TACTICAL AIR CONTROL		US AIR FORCE	
Air Operations (fixed wing)	TACTICAL AIR CONTROL		US MARINE CORPS	
Air Operations (fixed wing)	TACTICAL AIR CONTROL		US NAVY	
Air Operations (rotary wing)	ASSAULT		US ARMY	
Air Operations (rotary wing)	ASSAULT		US MARINE CORPS	
Air Operations (rotary wing)	ATTACK		US ARMY	
Air Operations (rotary wing)	ATTACK		US MARINE CORPS	

Air Operations (rotary wing)	ATTACK		USSOCOM	
Air Operations (rotary wing)	TRANSPORT		US ARMY	
Air Operations (rotary wing)	TRANSPORT		US MARINE CORPS	
Air Operations (rotary wing)	TRANSPORT		US NAVY	
Armor/ Mechanized Operations	Heavy Division		US ARMY	
C4 Systems	Communications		DEFENSE INFORMATION SYSTEMS AGENCY	
C4 Systems	Communications		JOINT COMMUNICATIONS SUPPORT ELEMENT	
C4 Systems	Communications		US AIR FORCE	
C4 Systems	Communications		US ARMY	
C4 Systems	Communications		US COAST GUARD	
C4 Systems	Communications		US MARINE CORPS	
C4 Systems	Communications		US NAVY	
C4 Systems	Communications		USSPACECOM	
C4 Systems	Information Systems		US AIR FORCE	
C4 Systems	Information Systems		US ARMY	
C4 Systems	Information Systems		US MARINE CORPS	
C4 Systems	Information Systems		US NAVY	
Combating Terrorism	Antiterrorism		FBI	
Combating Terrorism	Antiterrorism		US AIR FORCE	
Combating Terrorism	Antiterrorism		US ARMY	
Combating Terrorism	Counterterrorism		DEPARTMENT OF STATE	
Combating Terrorism	Counterterrorism		US AIR FORCE	
Combating Terrorism	Counterterrorism		US ARMY	
Combating Terrorism	Counterterrorism		US MARINE CORPS	
Combating Terrorism	Counterterrorism		USSOCOM	
Counterair	Air Defense	AIR	US AIR FORCE	
Counterair	Air Defense	LAND	US ARMY	
Counterair	Air Defense	SEA	US COAST GUARD	
Counterair	Air Defense	AIR	US MARINE CORPS	
Counterair	Air Defense	LAND	US MARINE CORPS	
Counterair	Air Defense	AIR	US NAVY	
Counterair	Air Defense	SEA	US NAVY	
Counterair	Suppression of Enemy Air Defenses		US AIR FORCE	
Counterair	Suppression of Enemy Air Defenses		US ARMY	
Counterair	Suppression of Enemy Air Defenses		US MARINE CORPS	
Counterair	Suppression of Enemy Air Defenses		US NAVY	
Counterair	Theater Missile Defense		US AIR FORCE	
Counterair	Theater Missile Defense		US ARMY	
Counterair	Theater Missile Defense		US MARINE CORPS	
Counterair	Theater Missile Defense		US NAVY	
Counterdrug			DEA	
Counterdrug			US AIR FORCE	
Counterdrug			US ARMY	
Counterdrug			US COAST GUARD	
Counterdrug			US NAVY	
Counterdrug			USBP	
Counterdrug			USSOCOM	
Counterinsurgency			US AIR FORCE	
Counterinsurgency			US ARMY	
Counterinsurgency			US MARINE CORPS	
Counterinsurgency			US NAVY	
Counterinsurgency			USSOCOM	
Counterproliferation			JOINT	Proliferation prevention
Counterproliferation			JOINT	Intel,/surveillance/recon (ISR)
Counterproliferation			JOINT	Passive defense
Counterproliferation			JOINT	Active defense
Counterproliferation			JOINT	Counterforce
Domestic Support Operations	Military Support of Civilian Law Agencies		FBI	

Domestic Support Operations	Military Support of Civilian Law Agencies		US AIR FORCE	
Domestic Support Operations	Military Support of Civilian Law Agencies		US ARMY	
Domestic Support Operations	Military Support of Civilian Law Agencies		US CUSTOMS SERVICE	
Domestic Support Operations	Military Support of Civilian Law Agencies		US MARINE CORPS	
Domestic Support Operations	Military Support of Civilian Law Agencies		US NAVY	
Domestic Support Operations	Military Support to Civil Authorities		US AIR FORCE	
Domestic Support Operations	Military Support to Civil Authorities		US ARMY	
Domestic Support Operations	Military Support to Civil Authorities		US MARINE CORPS	
Domestic Support Operations	Military Support to Civil Authorities		US NAVY	
Engineer			US AIR FORCE	
Engineer			US ARMY	
Engineer			US MARINE CORPS	
Engineer			US NAVY	
Explosive Ordnance Disposal			US AIR FORCE	
Explosive Ordnance Disposal			US ARMY	
Explosive Ordnance Disposal			US MARINE CORPS	
Explosive Ordnance Disposal			US NAVY	
Fire Support	Air Assault Operations		US ARMY	AIR ASSAULT DIVISION
Fire Support	Airborne Operations		US ARMY	AIRBORNE DIVISION
Fire Support	Amphibious Operations		US ARMY	
Fire Support	Amphibious Operations		US MARINE CORPS	
Fire Support	Amphibious Operations		US NAVY	
Fire Support		AIR	US AIR FORCE	
Fire Support		LAND	US ARMY	
Fire Support		AIR	US ARMY	
Fire Support		LAND	US MARINE CORPS	
Fire Support		AIR	US MARINE CORPS	
Fire Support		SEA	US NAVY	CRUISERS
Fire Support		SEA	US NAVY	DESTROYERS
Fire Support		SEA	US NAVY	FRIGATES
Fire Support		AIR	US NAVY	
Fire Support		AIR	USSOCOM	
Health Services			US AIR FORCE	
Health Services			US ARMY	
Health Services			US MARINE CORPS	
Health Services			US NAVY	
Health Services			USPHS	
Health Services			USSOCOM	
Infantry Operations	AIR ASSAULT		US ARMY	
Infantry Operations	AIRBORNE		US ARMY	
Infantry Operations	LIGHT		US ARMY	
Infantry Operations	LIGHT ARMOR		US ARMY	
Infantry Operations	MECHANIZED		US ARMY	
Infantry Operations	RANGER		US ARMY	
Infantry Operations	US MARINE CORPS		US MARINE CORPS	
Intelligence	Counterintelligence		CIA	
Intelligence	Counterintelligence		Defense Intelligence Agency	
Intelligence	Counterintelligence		DEPARTMENT OF STATE	
Intelligence	Counterintelligence		Drug Enforcement Administration	
Intelligence	Counterintelligence		FBI	
Intelligence	Counterintelligence		NSA	
Intelligence	Counterintelligence		US AIR FORCE	
Intelligence	Counterintelligence		US ARMY	
Intelligence	Counterintelligence		US COAST GUARD	

Intelligence	Counterintelligence		US MARINE CORPS	
Intelligence	Counterintelligence		US NAVY	
Intelligence	Geospatial Information		NIMA	
Intelligence	Geospatial Information		NOAA	
Intelligence	Geospatial Information		US AIR FORCE	
Intelligence	Geospatial Information		US ARMY	
Intelligence	Geospatial Information		US MARINE CORPS	
Intelligence	Geospatial Information		US NAVY	
Intelligence	Geospatial Information		USSOCOM	
Intelligence	Geospatial Information		USSPACECOM	
Intelligence	Imagery		NIMA	
Intelligence			CIA	CIA
Intelligence			JC2WC	JC2WC
Intelligence			JCMA	JCMA
Intelligence			JSC DIA	JSC DIA
Intelligence			JWAC	JWAC
Intelligence			NSA	NSA
Intelligence			US AIR FORCE	USAF AFIWC
Intelligence			US ARMY	USA LIWA
Intelligence			US NAVY	USN FIWC
Interdiction			US AIR FORCE	
Interdiction			US ARMY	
Interdiction			US MARINE CORPS	
Interdiction			US NAVY	
Interdiction			USSTRATCOM	
Meteorology and Oceanography			NOAA	
Meteorology and Oceanography			US AIR FORCE	
Meteorology and Oceanography			US ARMY	
Meteorology and Oceanography			US MARINE CORPS	
Meteorology and Oceanography			US NAVY	
Meteorology and Oceanography			USSOCOM	
Military Police			US AIR FORCE	
Military Police			US ARMY	
Military Police			US MARINE CORPS	
Mine Warfare		AIR/ SEA	US AIR FORCE	
Mine Warfare		LAND	US ARMY	
Mine Warfare			US MARINE CORPS	
Mine Warfare			US NAVY	
Mortuary Affairs			US ARMY	
NBC			US ARMY	
NBC			US MARINE CORPS	
Nuclear Operations			DTRA	
Nuclear Operations			USSTRATCOM	
Personnel			US AIR FORCE	
Personnel			US ARMY	
Personnel			US MARINE CORPS	
Personnel			US NAVY	
Public Affairs			US AIR FORCE	
Public Affairs			US ARMY	
Public Affairs			US COAST GUARD	
Public Affairs			US INFORMATION AGENCY	
Public Affairs			US MARINE CORPS	
Public Affairs			US NAVY	
Recon/Surveillance/Tgt Acq			US AIR FORCE	
Recon/Surveillance/Tgt Acq			US ARMY	
Recon/Surveillance/Tgt Acq			US COAST GUARD	
Recon/Surveillance/Tgt Acq			US MARINE CORPS	
Recon/Surveillance/Tgt Acq			US NAVY	
Religious Support			US AIR FORCE	
Religious Support			US ARMY	
Religious Support			US MARINE CORPS	

Religious Support			US NAVY	
Search and Rescue			NOAA	
Search and Rescue			US AIR FORCE	
Search and Rescue			US ARMY	
Search and Rescue			US COAST GUARD	
Search and Rescue			US MARINE CORPS	
Search and Rescue			US NAVY	
Search and Rescue			USSOCOM	
Space Operations			NIMA	
Space Operations			US AIR FORCE	
Space Operations			US ARMY	
Space Operations			US NAVY	
Space Operations			USSPACECOM	
Special Operations	AFSOF		US AIR FORCE	
Special Operations	ARSOF		US ARMY	
Special Operations	NAVSOF		US NAVY	
Strategic Warfare			STRATCOM	
Strike Warfare			US NAVY	CARRIER AIR WING
Submarine Warfare	ATTACK		US NAVY	
Submarine Warfare	BALLISTIC MISSILE		US NAVY	
Surface Warfare			US COAST GUARD	
Surface Warfare			US NAVY	
Surface Warfare			US NAVY	CRUISERS
Surface Warfare			US NAVY	FRIGATES
Surface Warfare			US NAVY	DESTROYERS
Surface Warfare			US NAVY	CARRIERS
Sustainment	AMMUNITION		ALL MILITARY	
Sustainment	BILLETING		ALL MILITARY	
Sustainment	BULK PETROLEUM		ALL MILITARY	
Sustainment	EXCHANGE SERVICES		ALL MILITARY	
Sustainment	FINANCE		ALL MILITARY	
Sustainment	LEGAL SERVICES		ALL MILITARY	
Sustainment	MAINTENANCE		ALL MILITARY	
Sustainment	MARITIME/ AFLOAT PREPOSITIONING		ALL MILITARY	
Sustainment	POSTAL		ALL MILITARY	
Sustainment	RELIGIOUS SERVICES		ALL MILITARY	
Sustainment	SUBSISTENCE		ALL MILITARY	
Sustainment	SUPPLY		ALL MILITARY	
Sustainment	VETERINARY SERVICE		ALL MILITARY	
Sustainment	WATER		ALL MILITARY	
Tac Air Suppt of Maritime Ops			US AIR FORCE	
Tac Air Suppt of Maritime Ops			US MARINE CORPS	
Targeting			JWAC	
Targeting			US AIR FORCE	
Targeting			US ARMY	
Targeting			US MARINE CORPS	
Targeting			US NAVY	
Transportation	AEROMEDICAL EVACUATION		US AIR FORCE	
Transportation	AIR TERMINAL OPERATIONS		US AIR FORCE	
Transportation	AIR TERMINAL OPERATIONS		US ARMY	
Transportation	AIR TERMINAL OPERATIONS		US NAVY	
Transportation	AIR TERMINAL OPERATIONS		USTRANSCOM	
Transportation	HARBOR DEFENSE		US COAST GUARD	
Transportation	HARBOR DEFENSE		US NAVY	
Transportation	INTERTHEATER	AIR	US AIR FORCE	
Transportation	INTRATHEATER	AIR	US AIR FORCE	
Transportation	MOTOR		MTMC	
Transportation	MOTOR		US ARMY	
Transportation	PORT SECURITY		US MARINE CORPS	

Transportation	PORT SECURITY		US NAVY	
Transportation	RAIL		MTMC	
Transportation	RAIL		US ARMY	
Transportation	SEA/ WATER RESUPPLY		US MARINE CORPS	
Transportation	SEA/ WATER RESUPPLY		US NAVY	
Transportation	WATER TERMINAL OPERATIONS		US ARMY	
Transportation	WATER TERMINAL OPERATIONS		US MARINE CORPS	
Transportation	WATER TERMINAL OPERATIONS		US NAVY	
Transportation	WATER TERMINAL OPERATIONS		USTRANSCOM	
Undersea Warfare	sensors, wpns, platforms, tgts		US NAVY	Submarines
Undersea Warfare	sensors, wpns, platforms, tgts		US NAVY	ASW surface combatants/aircraft.
Undersea Warfare	sensors, wpns, platforms, tgts		US NAVY	Integrated undersea surveillance sys

Appendix C. Joint Force Capabilities Sorted by Service (JP 3-33, CD-ROM)

Capability Owner	General Capability Category	Capability Task	Medium	Tools
ALL MILITARY	Sustainment	AMMUNITION		
ALL MILITARY	Sustainment	BILLETING		
ALL MILITARY	Sustainment	BULK PETROLEUM		
ALL MILITARY	Sustainment	EXCHANGE SERVICES		
ALL MILITARY	Sustainment	FINANCE		
ALL MILITARY	Sustainment	LEGAL SERVICES		
ALL MILITARY	Sustainment	MAINTENANCE		
ALL MILITARY	Sustainment	MARITIME/ AFLOAT PREPOSITIONING		
ALL MILITARY	Sustainment	POSTAL		
ALL MILITARY	Sustainment	RELIGIOUS SERVICES		
ALL MILITARY	Sustainment	SUBSISTENCE		
ALL MILITARY	Sustainment	SUPPLY		
ALL MILITARY	Sustainment	VETERINARY SERVICE		
ALL MILITARY	Sustainment	WATER		
CIA	Intelligence	Counterintelligence		
CIA	Intelligence			CIA
DEA	Counterdrug			
DEFENSE INFORMATION SYSTEMS AGENCY	C4 Systems	Communications		
Defense Intelligence Agency	Intelligence	Counterintelligence		
DEPARTMENT OF STATE	Combating Terrorism	Counterterrorism		
DEPARTMENT OF STATE	Intelligence	Counterintelligence		
Drug Enforcement Administration	Intelligence	Counterintelligence		
DTRA	Nuclear Operations			
FBI	Combating Terrorism	Antiterrorism		
FBI	Domestic Support Operations	Military Support of Civilian Law Agencies		
FBI	Intelligence	Counterintelligence		
JC2WC	Intelligence			JC2WC
JCMA	Intelligence			JCMA
JOINT	Counterproliferation			Proliferation prevention
JOINT	Counterproliferation			Intelligence, surveillance and reconnaissance (ISR)
JOINT	Counterproliferation			Passive defense
JOINT	Counterproliferation			Active defense
JOINT	Counterproliferation			Counterforce
JOINT COMMUNICATIONS SUPPORT	C4 Systems	Communications		

ELEMENT				
JSC DIA	Intelligence			JSC DIA
JWAC	Intelligence			JWAC
JWAC	Targeting			
MTMC	Transportation	MOTOR		
MTMC	Transportation	RAIL		
NIMA	Air Operations (fixed wing)	AERIAL IMAGERY		
NIMA	Air Operations (fixed wing)	AERIAL IMAGERY		
NIMA	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
NIMA	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
NIMA	Intelligence	Geospatial Information		
NIMA	Intelligence	Imagery		
NIMA	Space Operations			
NOAA	Air Operations (fixed wing)	AERIAL IMAGERY		
NOAA	Air Operations (fixed wing)	AERIAL IMAGERY		
NOAA	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
NOAA	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
NOAA	Intelligence	Geospatial Information		
NOAA	Meteorology and Oceanography			
NOAA	Search and Rescue			
NSA	Intelligence	Counterintelligence		
NSA	Intelligence			NSA
STRATCOM	Strategic Warfare			
US AIR FORCE	Air Operations (fixed wing)	AERIAL IMAGERY		
US AIR FORCE	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US AIR FORCE	Air Operations (fixed wing)	AERIAL REFUELING		
US AIR FORCE	Air Operations (fixed wing)	AIR INTERDICTION		
US AIR FORCE	Air Operations (fixed wing)	CLOSE AIR SUPPORT		
US AIR FORCE	Air Operations (fixed wing)	COMBAT AIR PATROL		
US AIR FORCE	Air Operations (fixed wing)	COUNTERAIR	AIR	
US AIR FORCE	Air Operations (fixed wing)	DEEP AIR SUPPORT		
US AIR FORCE	Air Operations (fixed wing)	TACTICAL AIR CONTROL		
US AIR FORCE	C4 Systems	Communications		
US AIR FORCE	C4 Systems	Information Systems		
US AIR FORCE	Combating Terrorism	Antiterrorism		
US AIR FORCE	Counterair	Air Defense	AIR	
US AIR FORCE	Counterair	Suppression of Enemy Air		

		Defenses		
US AIR FORCE	Counterair	Theater Missile Defense		
US AIR FORCE	Counterdrug			
US AIR FORCE	Counterinsurgency			
US AIR FORCE	Domestic Support Operations	Military Support of Civilian Law Agencies		
US AIR FORCE	Domestic Support Operations	Military Support to Civil Authorities		
US AIR FORCE	Engineer			
US AIR FORCE	Explosive Ordnance Disposal			
US AIR FORCE	Fire Support		AIR	
US AIR FORCE	Health Services			
US AIR FORCE	Intelligence	Counterintelligence		
US AIR FORCE	Intelligence	Geospatial Information		
US AIR FORCE	Intelligence			USAF AFIWC
US AIR FORCE	Interdiction			
US AIR FORCE	Meteorology and Oceanography			
US AIR FORCE	Military Police			
US AIR FORCE	Mine Warfare		AIR/ SEA	
US AIR FORCE	Personnel			
US AIR FORCE	Public Affairs			
US AIR FORCE	Recon/Surveillance/Tgt Acq			
US AIR FORCE	Religious Support			
US AIR FORCE	Search and Rescue			
US AIR FORCE	Space Operations			
US AIR FORCE	Special Operations	AFSOF		
US AIR FORCE	Targeting			
US AIR FORCE	Transportation	AIR TERMINAL OPERATIONS		
US AIR FORCE	Combating Terrorism	Counterterrorism		
US AIR FORCE	Tac Air Suppt of Maritime Ops			
US AIR FORCE	Transportation	AEROMEDICAL EVACUATION		
US AIR FORCE	Transportation	INTERTHEATER	AIR	
US AIR FORCE	Transportation	INTRATHEATER	AIR	
US ARMY	Air Operations (fixed wing)	AERIAL IMAGERY		
US ARMY	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US ARMY	Air Operations (fixed wing)	AIR INTERDICTION		
US ARMY	Air Operations (fixed wing)	CLOSE AIR SUPPORT		
US ARMY	Air Operations (fixed wing)	COUNTERAIR	LAND	
US ARMY	Air Operations (rotary wing)	ASSAULT		
US ARMY	Air Operations (rotary wing)	ATTACK		

US ARMY	Air Operations (rotary wing)	TRANSPORT		
US ARMY	Armor/ Mechanized Operations	Heavy Division		
US ARMY	C4 Systems	Communications		
US ARMY	C4 Systems	Information Systems		
US ARMY	Combating Terrorism	Antiterrorism		
US ARMY	Combating Terrorism	Counterterrorism		
US ARMY	Counterair	Air Defense	LAND	
US ARMY	Counterair	Suppression of Enemy Air Defenses		
US ARMY	Counterair	Theater Missile Defense		
US ARMY	Counterdrug			
US ARMY	Counterinsurgency			
US ARMY	Domestic Support Operations	Military Support of Civilian Law Agencies		
US ARMY	Domestic Support Operations	Military Support to Civil Authorities		
US ARMY	Engineer			
US ARMY	Explosive Ordnance Disposal			
US ARMY	Fire Support	Air Assault Operations		AIR ASSAULT DIVISION
US ARMY	Fire Support	Airborne Operations		AIRBORNE DIVISION
US ARMY	Fire Support	Amphibious Operations		
US ARMY	Fire Support		LAND	
US ARMY	Fire Support		AIR	
US ARMY	Health Services			
US ARMY	Infantry Operations	AIR ASSAULT		
US ARMY	Infantry Operations	AIRBORNE		
US ARMY	Infantry Operations	LIGHT		
US ARMY	Infantry Operations	LIGHT ARMOR		
US ARMY	Infantry Operations	MECHANIZED		
US ARMY	Infantry Operations	RANGER		
US ARMY	Intelligence	Counterintelligence		
US ARMY	Intelligence	Geospatial Information		
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US ARMY	Interdiction			
US ARMY	Meteorology and Oceanography			
US ARMY	Military Police			
US ARMY	Mine Warfare		LAND	
US ARMY	Mortuary Affairs			
US ARMY	NBC			
US ARMY	Personnel			
US ARMY	Public Affairs			
US ARMY	Recon/Surveillance/Tgt Acq			
US ARMY	Religious Support			
US ARMY	Search and Rescue			

US ARMY	Space Operations			
US ARMY	Special Operations	ARSOF		
US ARMY	Targeting			
US ARMY	Transportation	AIR TERMINAL OPERATIONS		
US ARMY	Transportation	MOTOR		
US ARMY	Transportation	RAIL		
US ARMY	Transportation	WATER TERMINAL OPERATIONS		
US COAST GUARD	Air Operations (fixed wing)	AERIAL IMAGERY		
US COAST GUARD	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US COAST GUARD	Air Operations (fixed wing)	COUNTERAIR	SEA	
US COAST GUARD	C4 Systems	Communications		
US COAST GUARD	Counterair	Air Defense	SEA	
US COAST GUARD	Counterdrug			
US COAST GUARD	Intelligence	Counterintelligence		
US COAST GUARD	Public Affairs			
US COAST GUARD	Recon/Surveillance/Tgt Acq			
US COAST GUARD	Search and Rescue			
US COAST GUARD	Surface Warfare			
US COAST GUARD	Transportation	HARBOR DEFENSE		
US CUSTOMS SERVICE	Air Operations (fixed wing)	AERIAL IMAGERY		
US CUSTOMS SERVICE	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US CUSTOMS SERVICE	Domestic Support Operations	Military Support of Civilian Law Agencies		
US INFORMATION AGENCY	Public Affairs			
US MARINE CORPS	Air Operations (fixed wing)	AERIAL IMAGERY		
US MARINE CORPS	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US MARINE CORPS	Air Operations (fixed wing)	AERIAL REFUELING		
US MARINE CORPS	Air Operations (fixed wing)	AIR INTERDICTION		
US MARINE CORPS	Air Operations (fixed wing)	CLOSE AIR SUPPORT		
US MARINE CORPS	Air Operations (fixed wing)	COMBAT AIR PATROL		
US MARINE CORPS	Air Operations (fixed wing)	COUNTERAIR	AIR	
US MARINE CORPS	Air Operations (fixed wing)	COUNTERAIR	LAND	
US MARINE CORPS	Air Operations (fixed wing)	DEEP AIR SUPPORT		
US MARINE CORPS	Air Operations (fixed wing)	TACTICAL AIR CONTROL		
US MARINE CORPS	Air Operations (rotary wing)	ASSAULT		
US MARINE CORPS	Air Operations (rotary wing)	ATTACK		

US MARINE CORPS	Air Operations (rotary wing)	TRANSPORT		
US MARINE CORPS	C4 Systems	Communications		
US MARINE CORPS	C4 Systems	Information Systems		
US MARINE CORPS	Combating Terrorism	Counterterrorism		
US MARINE CORPS	Counterair	Air Defense	AIR	
US MARINE CORPS	Counterair	Air Defense	LAND	
US MARINE CORPS	Counterair	Suppression of Enemy Air Defenses		
US MARINE CORPS	Counterair	Theater Missile Defense		
US MARINE CORPS	Counterinsurgency			
US MARINE CORPS	Domestic Support Operations	Military Support of Civilian Law Agencies		
US MARINE CORPS	Domestic Support Operations	Military Support to Civil Authorities		
US MARINE CORPS	Engineer			
US MARINE CORPS	Explosive Ordnance Disposal			
US MARINE CORPS	Fire Support	Amphibious Operations		
US MARINE CORPS	Fire Support		LAND	
US MARINE CORPS	Fire Support		AIR	
US MARINE CORPS	Health Services			
US MARINE CORPS	Infantry Operations	US MARINE CORPS		
US MARINE CORPS	Intelligence	Counterintelligence		
US MARINE CORPS	Interdiction			
US MARINE CORPS	Meteorology and Oceanography			
US MARINE CORPS	Military Police			
US MARINE CORPS	Mine Warfare			
US MARINE CORPS	NBC			
US MARINE CORPS	Personnel			
US MARINE CORPS	Public Affairs			
US MARINE CORPS	Recon/Surveillance/Tgt Acq			
US MARINE CORPS	Religious Support			
US MARINE CORPS	Search and Rescue			
US MARINE CORPS	Tac Air Suppt of Maritime Ops			
US MARINE CORPS	Targeting			
US MARINE	Transportation	PORT SECURITY		

CORPS				
US MARINE CORPS	Transportation	SEA/ WATER RESUPPLY		
US MARINE CORPS	Transportation	WATER TERMINAL OPERATIONS		
US MARINE CORPS	Intelligence	Geospatial Information		
US NAVY	Air Operations (fixed wing)	AERIAL IMAGERY		
US NAVY	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
US NAVY	Air Operations (fixed wing)	AERIAL REFUELING		
US NAVY	Air Operations (fixed wing)	AIR INTERDICTION		
US NAVY	Air Operations (fixed wing)	CLOSE AIR SUPPORT		
US NAVY	Air Operations (fixed wing)	COMBAT AIR PATROL		
US NAVY	Air Operations (fixed wing)	COUNTERAIR	AIR	
US NAVY	Air Operations (fixed wing)	COUNTERAIR	SEA	
US NAVY	Air Operations (fixed wing)	DEEP AIR SUPPORT		
US NAVY	Air Operations (fixed wing)	TACTICAL AIR CONTROL		
US NAVY	Air Operations (rotary wing)	TRANSPORT		
US NAVY	C4 Systems	Communications		
US NAVY	C4 Systems	Information Systems		
US NAVY	Counterair	Air Defense	AIR	
US NAVY	Counterair	Air Defense	SEA	
US NAVY	Counterair	Suppression of Enemy Air Defenses		
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US NAVY	Domestic Support Operations	Military Support of Civilian Law Agencies		
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US NAVY	Fire Support	Amphibious Operations		
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US NAVY	Fire Support		SEA	DESTROYERS
US NAVY	Fire Support		SEA	FRIGATES
US NAVY	Fire Support		AIR	
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US NAVY	Meteorology and Oceanography			
US NAVY	Mine Warfare			
US NAVY	Personnel			
US NAVY	Public Affairs			
US NAVY	Recon/Surveillance/Tgt Acq			
US NAVY	Religious Support			
US NAVY	Search and Rescue			
US NAVY	Space Operations			
US NAVY	Special Operations	NAVSOF		
US NAVY	Strike Warfare			CARRIER AIR WING
US NAVY	Submarine Warfare	ATTACK		
US NAVY	Submarine Warfare	BALLISTIC MISSILE		
US NAVY	Surface Warfare			
US NAVY	Surface Warfare			CRUISERS
US NAVY	Surface Warfare			FRIGATES
US NAVY	Surface Warfare			DESTROYERS
US NAVY	Surface Warfare			CARRIERS
US NAVY	Targeting			
US NAVY	Transportation	AIR TERMINAL OPERATIONS		
US NAVY	Transportation	HARBOR DEFENSE		
US NAVY	Transportation	PORT SECURITY		
US NAVY	Transportation	SEA/ WATER RESUPPLY		
US NAVY	Transportation	WATER TERMINAL OPERATIONS		
US NAVY	Undersea Warfare	sensors, wpns, platforms, tgts		submarines
US NAVY	Undersea Warfare	sensors, wpns, platforms, tgts		ASW capable surface combatants and aircraft.
US NAVY	Undersea Warfare	sensors, wpns, platforms, tgts		Integrated undersea surveillance system
USBP	Counterdrug			
USPHS	Health Services			
USSOCOM	Air Operations (fixed wing)	AERIAL REFUELING		
USSOCOM	Air Operations (fixed wing)	CLOSE AIR SUPPORT		
USSOCOM	Air Operations (rotary wing)	ATTACK		
USSOCOM	Combating Terrorism	Counterterrorism		
USSOCOM	Counterdrug			
USSOCOM	Counterinsurgency			
USSOCOM	Fire Support		AIR	
USSOCOM	Health Services			
USSOCOM	Intelligence	Geospatial Information		
USSOCOM	Meteorology and Oceanography			
USSOCOM	Search and Rescue			
USSPACECOM	Air Operations (fixed	AERIAL IMAGERY		

	wing)			
USSPACECOM	Air Operations (fixed wing)	AERIAL RECONNAISSANCE		
USSPACECOM	C4 Systems	Communications		
USSPACECOM	Intelligence	Geospatial Information		
USSPACECOM	Space Operations			
USSTRATCOM	Air Operations (fixed wing)	AIR INTERDICTION		
USSTRATCOM	Interdiction			
USSTRATCOM	Nuclear Operations			
USTRANSCOM	Air Operations (fixed wing)	AERIAL REFUELING		
USTRANSCOM	Transportation	AIR TERMINAL OPERATIONS		
USTRANSCOM	Transportation	WATER TERMINAL OPERATIONS		

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Vita

Captain Carlos H. Ortiz was born in Los Alamos, NM. He graduated from Pojoaque High School in May 1986. He entered undergraduate studies at New Mexico State University in Las Cruces, New Mexico, where he graduated with a Bachelor of Arts degree in Journalism, Advertising Administration and a Bachelor of Arts degree in Journalism, Creative Design in May 1990. He was commissioned through Detachment 550 AFROTC at New Mexico State University.

His first assignment was at Mather AFB as a student in Undergraduate Navigator Training in February 1991, followed by assignment as a student in B-52 Combat Crew Training School where he graduated as Distinguished Graduate. In November 1992, he was assigned as a B-52H Navigator in the 23rd Bomb Squadron, Air Combat Command, Minot AFB, North Dakota.

In July of 1994, Captain Ortiz retrained into the C-130E at Little Rock AFB, AR, where he was once again named Distinguished Graduate. In November 1994, he was assigned to Ramstein AB, Germany where he participated in Operations PROVIDE PROMISE, JOINT ENDEAVOR, DENY FLIGHT, JOINT GUARD, and other NATO supported European operations. In December 1997, he was assigned to the 62nd Airlift Squadron and 314th Operations Group where he served as a Formal Training Unit Instructor Navigator and Assistant Group Executive Officer. In May 2000, he entered the Advanced Study of Air Mobility program, Air Force Institute of Technology, at the Air Mobility Warfare Center, Fort Dix, New Jersey. Upon graduation, he will be assigned to the Air Staff as the Chief of Rated Force Policy, Mobility Forces at the Pentagon.

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14. ABSTRACT

As a result of the reduction in overseas U .S. forces at a time of global instability, the U.S. military has transformed to a home-based expeditionary force, highly dependent on rapid deployment to project force abroad in response to crisis. Effective response to crises demands rapid, decisive force projection in order to reduce loss of life, mitigate the after effects of disaster such as the spread of disease, and ensure success against our more hostile adversaries in time of war. Rapid force projection demands pre-deployment planning processes that are timely and flexible. Unfortunately, the current pre-deployment processes are neither rapid nor flexible enough to effectively respond to crises. Moving potentially tremendous amounts of personnel and equipment from CONUS bases, demands more efficient, effective planning tools and processes.

To facilitate changes to the deployment process, senior leadership has set a time standard for development and validation of a TPFDD force flow for the first seven days of a crisis within 72- hours. The USJFCOM]4 JDPO division has identified several process improvement areas to meet the 72-hour time standard. Key among them is the Joint Force Capabilities Register, a. capabilities-based tool for deployment planning.

This graduate research project addresses the current joint planning process, problems with the current process, the 72-hour objective time standard, the benefit of advance planning for crisis, and the merits and challenges of the USJFCOM Joint Force Capabilities Register. It provides a survey of crisis deployment acceleration initiatives from USSOCOM, USCENTCOM, and USP ACOM, and offers suggestions for accelerating the crisis deployment processes of the future

15. SUBJECT TERMS

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